ASIAN DEVELOPMENT

Outlook 2007

Update

Asian Development Bank

ISSN: 1655-4809
Publication Stock No. 080707

Asian Development Bank

The annual *Asian Development Outlook* provides a comprehensive economic analysis of 43 economies in developing Asia and the Pacific.

Foreword

This *Asian Development Outlook (ADO) 2007 Update* revises upward the forecast for growth in developing Asia for 2007 to 8.3% from the 7.6% forecast earlier this year, in *ADO*. This reassessment stems from the exceptionally strong performance of Asia's giants—the People's Republic of China (PRC) and India.

Buoyed by exports, investment, and consumption, the PRC posted its fastest growth rate since 1994 at 11.5% in the first half of the year. India, on the back of its quickest expansion in 18 years, grew by 9.3% in the first quarter of FY2007 (April–June). The headline number for 2007 has also been lifted by faster than expected growth in Indonesia and the Philippines.

The *Update* anticipates a gentle slowing of growth through 2008, but cautions that the outlook is highly uncertain. Unfolding events make predictions at this juncture particularly hazardous. It is clear, however, that developing Asia would not be immune from processes that erode consumer and investor confidence in the wider, global economy. A steep downturn in the United States, with knock-on effects in Japan and the euro zone, would mark a significant deterioration in the external environment and would undoubtedly cut into regional growth going into 2008. Negative impacts would be transmitted through both trade and financial channels.

At the same time, however, developing Asia is in a much better position to cope with adverse external developments: it has stout financial defenses and some scope for policy adjustments. A key message of the *Update* is that, beyond the gyrations in the global economy, developing Asia's growth prospects will continue to depend on how well economies cope with their own domestic challenges.

The *Update* also presents an analysis of export performance in East and Southeast Asia. This examines the influence of real exchange rate changes on export performance during 1990–2006, a period in which intermediate goods trade burgeoned. The results suggest that supply-side factors—including the quality of infrastructure and the business investment climate—play a very important role in regional export performance. This is particularly true for manufactured products and for some of the fastest-growing industries in global trade, such as electrical and nonelectrical machinery, as well as transport equipment.

The *Update* was prepared by the staff of the Asian Development Bank from the following departments: Central and West Asia, East Asia, South Asia, Southeast Asia, Pacific, and Economics and Research, as well as the resident missions of the Asian Development Bank. The economists who contributed the country chapters are: Mohammad Zahid Hossain and Rezaul Khan (Bangladesh); Jian Zhuang (People's Republic of China); Narhari Rao and Hiranya Mukhopadhyay (India); Purnima Rajapakse (Indonesia); Hiroki Kasahara (Malaysia); Jesus Felipe and Safdar Parvez (Pakistan); Tomomi Tamaki and Joven Balbosa (Philippines); Luxmon Attapich (Thailand); and Dao Viet Dung and Omkar Shrestha

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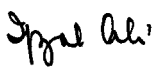
Frank Harrigan, Assistant Chief Economist, Macroeconomics and Finance Research Division, assisted by Cyn-Young Park and Edith Laviña, coordinated the overall production of the publication. Part 1, *Developing Asia and the world*, was prepared by Frank Harrigan, Cyn-Young Park, and Lea Sumulong. Juthatip Jongwanich provided the section on export dynamics in East Asia, with input from Ted James. Paolo Hernando contributed a box on oil subsidies, Gemma Estrada and Pilipinas Quising provided an analysis of *ADO*'s forecasting performance, and Shiela Camingue authored a section on estimating regional and subregional growth.

Technical and research support was provided by Shiela Camingue, Gemma Estrada, Paolo Hernando, Pilipinas Quising, Nedelyn Ramos, Lea Sumulong, and Rashiel Velarde.

Richard Niebuhr and Anthony Patrick as the economic editors made substantive contributions to the country chapters, subregional summaries, and other parts of the publication. Jonathan Aspin did the style and copy editing. Elizabeth E. Leuterio was responsible for typesetting and data linking, as well as graphics generation, assisted by Maria Susan Torres. Artwork and cover design were rendered by Mike Cortes of /Doubleslash/ Media Inc. Maria Susan Torres, Zenaida Acacio, and Pats Baysa provided administrative and secretarial support. The publication would not have been possible without the cooperation of the Printing Unit under the supervision of Raveendranath Rajan.

Ann Quon and Saby Mitra of the Department of External Relations planned and coordinated the dissemination of the *Update*.



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Definitions

The economies discussed in *Asian Development Outlook 2007 Update* are classified by major analytic or geographic groupings. For this publication, the following apply:

- **Association of Southeast Asian Nations (ASEAN)** comprises Brunei Darussalam, Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam.
- **Developing Asia** refers to 43 developing member countries of the Asian Development Bank.
- **Central Asia** comprises Armenia, Azerbaijan, Kazakhstan, Kyrgyz Republic, Tajikistan, Turkmenistan, and Uzbekistan.
- **East Asia** comprises People's Republic of China; Hong Kong, China; Republic of Korea; Mongolia; and Taipei,China.
- **South Asia** comprises Islamic Republic of Afghanistan, Bangladesh, Bhutan, India, Maldives, Nepal, Pakistan, and Sri Lanka.
- **Southeast Asia** comprises Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam.
- **The Pacific** comprises Cook Islands, Fiji Islands, Kiribati, Republic of the Marshall Islands, Federated States of Micronesia, Nauru, Papua New Guinea, Republic of Palau, Samoa, Solomon Islands, Democratic Republic of Timor-Leste, Tonga, Tuvalu, and Vanuatu.
- Unless otherwise specified, the symbol "$" and the word "dollar" refer to US dollars.

The *Statistical Notes* give a detailed explanation of how data are derived.
The *Update* is generally based on data available up to **31 August 2007**.

Acronyms and abbreviations

ASEAN	Association of Southeast Asian Nations
CDO	collateralized debt obligation
CPI	consumer price index
EU	European Union
FDI	foreign direct investment
FPE	fraction of positive errors
FY	fiscal year
GDP	gross domestic product
GNI	gross national income
IMF	International Monetary Fund
MAE	mean absolute error
MNE	multinational enterprise
NIE	newly industrialized economy
PPP	purchasing power parity
PRC	People's Republic of China
RMSE	root-mean-square error
US	United States
VAT	value-added tax
WTO	World Trade Organization

ADO 2007 Update—Highlights

- With growth of 8.3%, 2007 is likely to be another bumper year for developing Asia. This estimate has been revised up from the 7.6% forecast in March made by *Asian Development Outlook 2007*.

- Strong growth in the People's Republic of China (PRC) (now put at 11.2%) and India (8.5%) will spearhead expansion, but there is a more general pattern of high and, in some countries, accelerating growth. In the first half of 2007, the Philippines grew by 7.3%, the highest rate in almost 20 years, and the country is expected to post growth of 6.6% for the full year. In Indonesia, growth continues to edge up and is now expected to finish the year above 6%.

- The outlook for 2008 remains favorable, and the baseline forecast points to only a marginal slowing of growth to 8.2%. Momentum in the PRC and India is seen staying robust. In the PRC, double-digit growth of 10.8% is expected, and the pace of expansion in India should remain at 8.5%. Indonesia's prospects continue to brighten, with growth of 6.4% penciled in.

- Symptoms of overheating suggest that output is growing at close to its potential in the PRC and India. Stoked by rising food prices, inflation pressures are building in the PRC. Credit is expanding, and equity and property markets have posted strong gains. In India, even though inflation has cooled, the central bank remains vigilant and shows no signs yet of easing interest rates.

- Recent convulsions in credit markets and the possibility of spillovers into the real economy heighten uncertainty about the future. Events are still unfolding and predictions at this time are unusually fuzzy, with the chances of downward revisions becoming more likely.

- If growth in the United States (US) lurches down, developing Asia would not be immune. But the tremors from a downturn in the US are likely to be modest and short-lived even if it falls into recession. Available evidence suggests that, depending on timing, severity, and duration, a US recession could clip growth in developing Asia by 1–2 percentage points. If a synchronous steep downturn in the US, euro zone, and Japan were to occur—an event that currently seems improbable—growth in developing Asia would be at greater risk. But stout reserves, improved financial systems, and scope for policy adjustments put the region in a better position to weather any storm.

- A special chapter in this *Update* looks at the dynamics of East Asia's export performance over the past quarter century. Exports have been an important part of its growth story. The analysis reveals important changes over the years in the pattern and direction of exports and traces the emergence of sophisticated supply chains in the region. East Asia has shown itself to be particularly adept at positioning itself in the fastest-growing global export markets.

- As organizational and technological innovations have spurred the separation and refinement of tasks, their geographic dispersal, stimulated by the search for scale and cost advantages, has created trade. The chapter shows that this burgeoning "trade in tasks" is, in the short run, less sensitive to real exchange rate movements than are exports of primary commodities or finished manufactured goods. Supply-side factors, such as good infrastructure, a welcoming investment climate, and services and logistics support, play an important role in explaining export performance. The chapter finds, too, that demand external to Asia remains an important influence on regional exports. The parts and components that are traded within East Asia and that account for much of the growing regional integration are usually assembled in final products, which are shipped to external markets.

- Technical notes look at *Asian Development Outlook*'s forecasting performance and how the choice of aggregation weights influences estimates of regional and subregional growth.

Part 1

Developing Asia and the world

Developing Asia and the world

Developing Asia

Overview

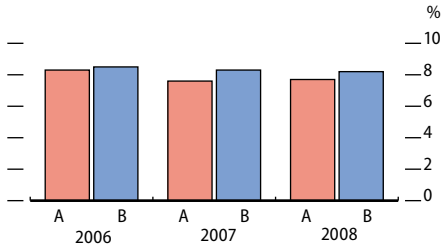
Developing Asia's prodigious growth continued through the first half of 2007, setting the scene for another bumper year. The region is now expected to expand by 8.3%, revised up from 7.6% projected in March's *Asian Development Outlook 2007* (Figure 1.1.1). Growth in 2008 is currently anticipated to slow gently to 8.2%. But this *Update* cautions that the outlook for 2008 is now hazy. The likelihood of growth slowing more abruptly than this *Update*'s central projections suggest is rising.

Revisions to 2007's growth projections are again heavily influenced by exceptionally strong performance in both the People's Republic of China (PRC) and India. In the first half of 2007, the PRC grew at 11.5%, faster than at any time since 1994. India, building on its fastest growth in 18 years in FY2006 (which ended in March 2007), registered growth of 9.3% in the first quarter of FY2007. Together, the PRC and India account for 55.3% of total gross domestic product (GDP) in developing Asia and so exert a powerful influence on regional trends (Figure 1.1.2). Their impact on aggregate projections and outcomes would be greater still if weights were calibrated in purchasing power parity terms rather than by the Atlas method (see the technical note, *Estimating subregional and regional growth for developing Asia*, in Part 4). The momentum of the PRC and India is expected to sustain solid regional performance through 2008.

Though these two countries' imprint dominates, a more general pattern of fast and, in places, accelerating growth is evident. The Philippines enjoyed its fastest growth in almost 20 years in the first half of 2007, and Indonesia's trend growth rate is steadily edging up. Central Asia, with oil and gas prices remaining high, continues to expand at a double-digit pace. So far, downside surprises have been few, though the process of healing Nepal's economy is slow and the Fiji Islands is now expected to contract more sharply in 2007 than previously thought.

So far, the storm in global credit markets has created only some turbulence in developing Asia—equity markets fell by an average of just 6% in August (Figure 1.1.3). Yet it is not clear whether the storm has blown itself out or merely paused. Financial innovation in global credit markets has succeeded in dispersing risks but this has created opacity about these risks' true magnitude and location. Increasing wariness about trading

1.1.1 GDP growth, developing Asia



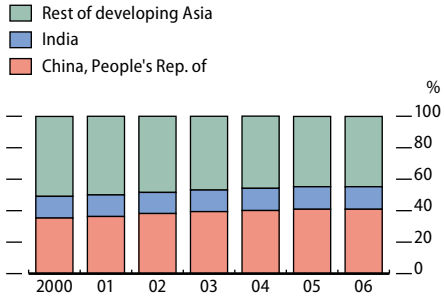
A = *ADO 2007*; B = *ADO 2007 Update.*

Note: Full-year data have led to upward revisions for 2006.

Source: Asian Development Outlook database.

Click here for figure data

1.1.2 Weights in regional aggregate



Source: World Bank, *World Development Indicators* online database, downloaded 16 February 2007.

Click here for figure data

in complex and now seemingly risky instruments has caused liquidity to evaporate, hobbling price discovery, and raising uncertainty about valuations that cannot be marked to market. These difficulties have led investors to retreat to safer assets.

In this climate, banks have been defensive, hoarding liquidity in anticipation of the need to lend to their off-balance-sheet investment vehicles and to buttress doubtful collateral. These structured investment vehicles face the prospect of difficulties in refinancing their short-term maturing liabilities, such as commercial paper, the proceeds of which have been invested in longer-term securities whose quality is now in doubt. Central banks have been active suppliers of needed liquidity to the banking system through their discount windows.

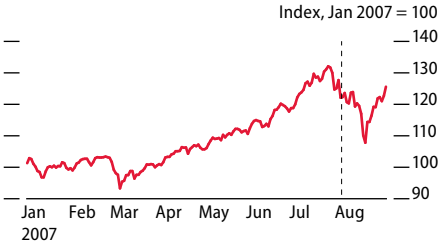
As the informational fog is likely to lift slowly, financial markets could remain jittery and disorderly for some time yet. Only incoming data can provide clues about the possible impact of the credit market squeeze on the outlook for economic growth and inflation. Data released in September on job losses in the United States (US) have led markets to view a cut in the Fed Funds rate at its September meeting as a virtual certainty. Though central banks will remain concerned about the health of the banking and broader financial systems, their key decisions on the overall direction of monetary policy are most likely to be driven by core objectives on inflation and output. They have other instruments at their disposal to boost liquidity and support the payments system.

Clearly, it is still early days and events in credit markets and the wider economy have become more difficult to predict. It would certainly be rash to assume that growth in developing Asia, particularly in 2008, would be immune to these unfolding processes. Though growth might slide in 2008 by more than foreseen in this *Update*'s central projections, a sharp dive still seems unlikely. Developing Asia's defenses against external shocks are solid: its financial systems are by and large in good shape and while isolated cases of overheating are in evidence, there is no general malaise. If growth were to slip a gear there is also some latitude to adjust domestic policies.

A key message of this *Update* is that beyond the immediate impacts of gyrations in the global economy, developing Asia's growth prospects will continue to depend on how well countries cope with their own domestic challenges. In terms of macroeconomic management, some countries are trying to juggle too many objectives given the instruments at their disposal. While exchange rate regimes are certainly more flexible than they once were, there is scope for still-greater flexibility (Figure 1.1.4).

Evidence presented in Part 2, *Export dynamics in East Asia*, suggests that from the perspective of developing durable export platforms, familiar supply-side factors (including the quality of infrastructure and the business investment climate) play a critical role. This analysis also confirms the continuing importance of external demand for the buoyancy of regional exports. But the influence of real exchange rates on exports appears complex and more subtle than its impact on demand alone. Finally, though Asia is adjusting to high oil prices, adjustments in some countries still have some way to go (see Box 1.1.1, *Evolution of retail fuel prices in Asia*). The opportunity costs of subsidies on gasoline, diesel, and kerosene remain high, and add to fiscal stresses.

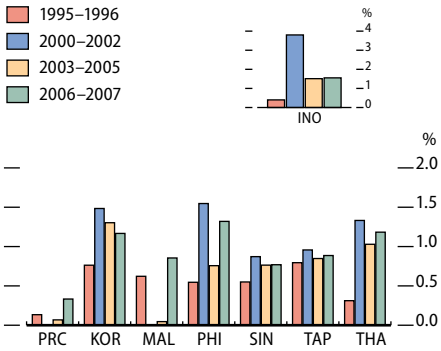
1.1.3 MSCI emerging markets, Asia



MSCI = Morgan Stanley Capital International, Inc.

Source: Bloomberg, downloaded 3 September 2007.

1.1.4 Exchange rate flexibility



PRC = China, People's Rep. of; INO = Indonesia; KOR = Korea, Rep. of; MAL = Malaysia; PHI = Philippines; SIN = Singapore; TAP = Taipei,China; THA = Thailand.

Note: Data refer to average absolute monthly percentage changes in exchange rate against the US dollar.

Sources: CEIC Data Company Ltd.; International Monetary Fund, *International Financial Statistics* online database; www.cbc.gov.tw; all downloaded 10 September 2007.

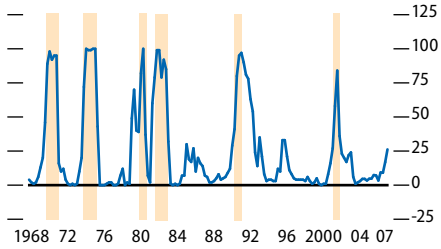
Click here for figure data

Global risks to the outlook now appear accentuated. The possible implications of a US slowdown for developing Asia are assessed below. But other risks remain. Avian flu is still a significant source of uncertainty with potentially devastating consequences, and concerns remain about growing trade protectionism. Geopolitical and security risks are heightened in some parts of the region, and political uncertainties, with important elections coming up, obscure the outlook for some countries.

Can developing Asia weather a US slowdown?

The odds are still against a recession in the US, but they are narrowing. The baseline forecast in this *Update* is that the US will experience a slowdown in 2007 and that growth will then pick up in 2008. It is expected that any acceleration in 2008 will be gentle and that output will remain below its potential level. Yet there is now much greater uncertainty around this baseline projection, with the "tails" on the probability of bad outcomes getting fatter. One measure now puts the chances of a US recession at over 1 in 4, its highest value since the last quarter of 2001 (Figure 1.1.5). The question is whether developing Asia could weather a much sharper slowdown than is currently anticipated.

1.1.5 Recession probability index



Note: The chart was prepared using US GDP growth data for the second quarter, released on 27 July 2007.

Source: http://www.econbrowser.com/archives/2007/07/recession_proba_2.html, downloaded 31 August 2007.

Despite rapid expansion in developing Asia and other parts of the world, the US remains the dominant economy globally in terms of its weight in GDP and in global financial market transactions. The US share of world exports is second only to that of the euro zone, and the country is the world's top importer. Though it is true that the weight of other regions, including developing Asia, is rising, and that their internal markets are becoming more closely integrated, it does not automatically follow that they have become impervious to the fortunes of the world's largest economy.

Other than economic size, there are several other reasons why the US is still likely to exercise a noticeable pull on other regions, and particularly on developing Asia. The first is that tighter regional trade ties are largely complementary to external trade linkages with the US. Indeed, in East and Southeast Asia, closer trade integration emerges largely as a result of back and forth trade in intermediate goods and parts, much of which is assembled in final goods for export to the US and other industrial countries. *Asian Development Outlook 2007* (Figure 1.5.5, p. 69) estimates that just under 79% of the merchandise that leaves Asia's ports eventually ends up in external markets. A chill in the US is therefore likely to send a downdraft along the region's supply chains. In a recent study at the European Central Bank, Dees and Vansteenkiste (2007) estimate that working back along the chain of direct and indirect demand for the region's exports, a 1% reduction in US GDP could instigate a contraction of 0.37 percentage points in developing Asia's GDP, having allowed for influences transmitted through adjustments to demand in other regions.

The explosive growth and integration of global financial markets constitute a second reason why significant uncoupling seems unlikely. "Home bias" in international financial markets is waning and investors increasingly have a global reach. There is compelling evidence not just of

1.1.1 Evolution of retail fuel prices in Asia

The global economy has been experiencing rising fuel costs, with the price of crude oil nudging $80 per barrel in early September 2007. Rising global consumption, coupled with supply restraint from the Organization of the Petroleum Exporting Countries (OPEC) and sluggish growth in non-OPEC oil production, has led to a tight market. Demand is expected to outrun supply in 2007, resulting in a drawdown of oil stocks.

In this context of rising and high fuel prices, some governments have sought to moderate the pass-through to consumers. To assess the extent of their interventions, retail prices in developing Asia were surveyed by Asian Development Bank resident missions in August 2007. The results of their survey update earlier exercises described in *Asian Development Outlook* (*ADO*) *2006* (published in April) and the *ADO Updates* of 2005 and 2006. (As for those publications, the basic methodology is that developed by the German Technical Cooperation, which runs similar surveys, the last being in November 2006.)

Retail fuel prices from the various surveys were compared against three benchmark prices and classified into four price bands. The first benchmark is Brent crude. Retail prices below this benchmark are subsidized and fall in the first price band, BC. The second benchmark is retail fuel prices in the United States (US). Prices above crude but below the US benchmark fall in the second price band, AC. The US fuel price is used as the cost recovery price; however, a range of factors, such as local processing and distribution costs, determines actual cost recovery for specific countries.

The third benchmark is retail fuel prices in Luxembourg, assigned as the European Union (EU) benchmark. Luxembourg fuel prices reflect EU-wide taxes, and allow for environmental costs. Fuel costs above US prices but below Luxembourg prices fall in the third price band, AUS, and suggest greater cost recovery, but are unlikely to mean that the consumer pays for environmental costs. Retail prices above the EU benchmark are put in the fourth price band, AEU.

The left panel of Table 1 presents data for retail diesel prices drawing on four surveys from 2004 to 2007 (*ADO 2005 Update*, *ADO 2006, ADO 2006 Update*, and the latest survey). It shows that over the 12 months between August 2006 and August 2007, diesel prices have generally moved to higher price bands. In fact there is only one economy that has dropped to a lower-priced band. Nine economies have moved to the next highest price band. Out of 32 economies in the August 2007 survey, 12 charged retail prices above the US benchmark. But only one of these (Republic of Korea) had prices above the EU benchmark.

Comparisons of surveyed prices with gasoline benchmarks are shown in the right panel. There has been some back and forth movement of gasoline prices in Asia relative to the US benchmark. As reported in *ADO 2005 Update,* 53% of economies priced above the

1 Movement of prices in terms of four price bands, diesel and gasoline

Economy	Diesel				Gasoline			
	Update 2005	*ADO 2006*	*Update 2006*	*Update 2007*	*Update 2005*	*ADO 2006*	*Update 2006*	*Update 2007*
Turkmenistan	BC	BC	BC	BC	BC	BC	BC	BC
Malaysia	BC	BC	BC	BC	AC	AC	AC	AC
Indonesia	BC	AC	AC	AC	AC	AC	AC	AC
Kazakhstan	AC	BC	BC	AC	AC	AC	AC	AC
Myanmar	BC	BC	AUS	AC	BC	BC	AC	BC
Azerbaijan	BC	BC	BC	AC	AC	BC	BC	AC
Pakistan	AC	AC	AC	AC	AUS	AUS	AUS	AUS
Viet Nam	AC	AC	AC	AC	AC	AC	AC	AC
Kyrgyz Republic	AC	AC	AC	AC	AC	AC	AC	AC
Uzbekistan	AC	BC	BC	AC	AC	AC	AC	AC
Bangladesh	AC	AC	BC	AC	AUS	AC	AC	AUS
China, People's Rep. of	AC	AC	AC	AC	AC	AC	AC	AC
Maldives	-	-	AC	AC	-	-	AC	AC
Sri Lanka	AC	AC	AC	AC	AUS	AUS	AUS	AUS
Afghanistan	AUS	AC	AC	AC	AC	AC	AC	AUS
India	AUS	AC	AC	AC	AUS	AUS	AUS	AUS
Tajikistan	AUS	AC	AC	AC	AUS	AC	AC	AUS
Thailand	AC	AC	AC	AC	AUS	AC	AC	AUS
Philippines	AC	AC	AC	AC	AC	AC	AC	AUS
Cambodia	AUS	AC	AUS	AUS	AUS	AUS	AUS	AUS
Taipei,China	AC	AC	AC	AUS	AUS	AC	AUS	AUS
Bhutan	AUS	AC	AC	AUS	AUS	AUS	AUS	AUS
Papua New Guinea	AUS	AUS	AUS	AUS	AUS	AUS	AUS	AUS
Lao People's Dem. Rep.	AC	AC	AC	AUS	AUS	AUS	AUS	AUS
Mongolia	AUS	AC	AUS	AUS	AUS	AC	AC	AUS
Nepal	AC	AC	AC	AUS	AUS	AUS	AUS	AUS
Singapore	AC	AC	AUS	AUS	AUS	AUS	AUS	AUS
Armenia	-	AC	AC	AUS	-	AUS	AUS	AUS
Timor-Leste, Dem. Rep.	AUS	AUS	AUS	AUS	AUS	AUS	AUS	AUS
Hong Kong, China	AEU	AEU	AUS	AUS	AEU	AEU	AEU	AEU
Fiji Islands	AUS	AUS	AUS	AUS	AUS	AUS	AUS	AUS
Korea, Rep. of	AUS	AEU	AEU	AEU	AEU	AEU	AEU	AEU
Memorandum items (prices in US cents per liter)								
Brent crude oil	27	40	49	47	27	40	49	47
US retail	57	76	80	77	54	77	85	75
Luxembourg retail	98	107	124	130	119	125	151	156

- = data not available; BC = below crude price; AC = above crude price but below US price; AUS = above US price but below Luxembourg price; AEU = above Luxembourg price.

Note: Economies arranged according to diesel prices in August 2007 (ascending order).

Sources: Surveys by ADB resident missions; national press reports; Bloomberg; Energy Information Administration, available: www.eia.doe.gov, downloaded 10 August 2007; German Technical Cooperation, *International Fuel Prices*, available: www.gtz.de/fuelprices.

1.1.1 Evolution of retail fuel prices in Asia *(continued)*

US benchmark. At publication of *ADO 2006* this was no longer true, as the US had racked up retail prices more quickly than the Asian economies in the sample, but by August 2007, some lagging economies in Asia had caught up with US price adjustments, so that two thirds of economies in the sample surpassed the US benchmark.

In terms of pricing regimes, Table 2 summarizes the August 2007 survey data on retail fuel price policies. At that date, fuel prices were still government controlled in more than half the economies in the sample. In limiting the pass-through effects of high crude prices to consumers, governments have resorted to direct and indirect means of controlling retail fuel prices.

Direct subsidies to lower retail prices for the whole population were used by 19% of the economies for gasoline and 25% for diesel. Direct subsidies or tax breaks for targeted industries, such as farming, fishing, and transportation, and for selected uses, such as cooking and electricity, were used by 53% of the economies.

Indirect methods of lowering fuel prices for the whole population, such as regulated pricing, compensatory tax changes, and use of state-owned petroleum companies to absorb losses, were used by 31% of the economies.

Whether directly or indirectly controlled, in over half the economies, regulated prices were raised as world prices rose.

To finance direct and indirect subsidies, governments primarily relied on budgetary provisions, with half the economies that administered fuel prices financing their subsidies through the budget. One third used compensating changes in taxes to soften the impact of fuel price increases. Others (28%) financed subsidies through state-owned enterprises, use of bank loans, issuance of bonds, or cross-subsidies.

The survey data suggest a slowly changing paradigm in fuel price policy in developing Asia. There has been a greater tolerance of the need to pass through rising fuel prices to consumers, even in economies where prices remain administered, suggesting some rebalancing of fiscal priorities. Nevertheless, subsidies and controlled prices persist, and prevail in a majority of economies.

Some governments view price controls and subsidies as an important way of providing support to those on low income, but poor targeting often means that these subsidies are captured by other groups. The opportunity cost of subsidizing fuel remains high.

2 Survey of retail fuel price policy in developing Asia, August 2007

Economy	Fuel price controlled for				Fuel price subsidized for				Change in administered price or subsidy in 2007	Direct subsidies or tax breaks for certain uses or targeted consumers	Subsidy financed through			
	A	B	C	D	A	B	C	D			Gov't. budget	Change in tax	Off budget	Other
Turkmenistan	√	√	√	√	√	√	√	√		√				
Malaysia	√	√			√	√					√			
Indonesia	√	√	√	√	√	√	√	√		√	√			
Kazakhstan	√	√	√	√		√			√	√	√	√		
Myanmar	√	√			√	√			√					
Azerbaijan	√	√	√	√	√	√	√	√	√	√	√			
Pakistan				√						√	√	√		
Viet Nam		√	√			√	√		√	√		√		√
Bangladesh	√	√	√						√	√				√
China, People's Rep. of	√	√	√	√						√				
Maldives										√				
Sri Lanka	√	√	√	√					√		√	√		√
Afghanistan										√	√			
India	√	√	√	√			√	√		√	√	√		√
Thailand				√				√		√				
Philippines										√				
Cambodia	√	√	√	√										
Taipei,China	√	√							√					
Bhutan										√				
Papua New Guinea	√	√	√						√					
Lao People's Dem. Rep.	√	√												
Nepal	√	√	√	√	√	√	√	√					√	√
Armenia				√				√					√	
Samoa	√	√	√	√					√	√				
Timor-Leste, Dem. Rep. of										√	√			
Fiji Islands	√	√	√	√					√	√		√		

A = gasoline; B = diesel; C = kerosene; D = LPG/fuel oil/gas.

Note: At the time of the survey, the following economies neither provided fuel subsidies nor controlled fuel prices: Hong Kong, China; Republic of Korea; Kyrgyz Republic; Mongolia; Singapore; and Tajikistan.

Sources: ADB resident missions; national energy agencies; international press reports.

strong comovement of prices for similar assets but also comovement of asset price volatility across markets. IMF (2007) observes that contagion through financial channels, in terms of both prices and volatility, is a particularly potent force for spillovers during asset market retreats. As the US is the global financial center, disturbances there almost inevitably reverberate in other regions.

More traditional transmission channels are also likely to be still in play. For example, a dip in global growth will probably influence the trajectory of primary commodity prices and therefore terms of trade. Exchange rate and interest rate changes may also have wealth effects and influence fiscal positions. But disentangling these and other possible sources of spillovers and making conjectures about their impact if growth in the US lunges downward is far from easy.

The evidence

One approach is to sift for clues from past episodes of US slowdowns. According to the National Bureau of Economic Research (NBER), the US has experienced only seven slowdowns since 1970 (five classified as recessions). Small-sample problems in the historical data are exacerbated by the fact that only a handful of countries in developing Asia actually have quarterly measurements of output that span these events. Annual data for East and Southeast Asia are shown in Figure 1.1.6.

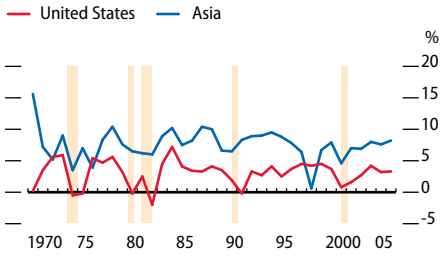
IMF (2007) calculates that for the five US recessions between 1974 and 2001, developing Asia's growth fell by about 0.28 percentage points for each percentage point decline in US growth. But this average masks a wide range. As a broad observation, US recessions that were triggered by wider global shocks (such as the oil price rises of the 1970s) were more closely associated with downturns in other regions. Those recessions incubated domestically (such as the aftermath of the savings and loan crisis of the early 1990s), had more limited spillovers. As the current problems in credit markets bear some superficial resemblance to those that surfaced after that crisis, it might be tempting to conclude that the threat from current ructions is not great. But in the early 1990s, global financial markets were much smaller than now, and not nearly so integrated.

The most recent recession, which started with the "dot-com" meltdown in 2000 and was propagated by a cyclical downturn in the electronics industry, presents a somewhat more arresting picture. During this recession, IMF (2007) estimates that growth in the US declined by 2.9 percentage points with growth in developing Asia falling by 1.1 percentage points. Only the oil price shocks of the early 1970s show more pronounced synchronization of growth decelerations.

Recessions and slowdowns appear to be quite different creatures from the perspective of their potential for spillover effects. NBER identifies two (non-recession) growth slowdowns in the US, in 1986 and 1995. In 1986, developing Asia was rebounding from a homegrown slowdown in growth that occurred in the first half of the 1980s. In the mid-1990s, the region's growth was high and stayed unruffled by slowing in the US. And again, during the course of the current slowdown in the US, growth has accelerated in developing Asia.

Averaging out across different phases of the US business cycle allows

1.1.6 GDP growth and US recessions

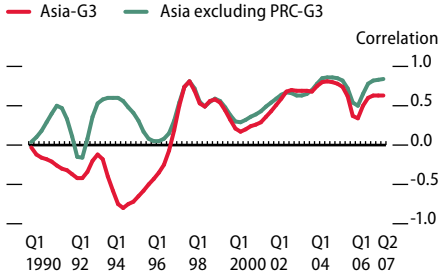


Note: Quarterly periods of US recessions, as defined by the National Bureau of Economic Research (NBER), are identified by the shaded areas. Annual growth rates are centered across the x-axis labels. Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei,China; and Thailand.

Sources: World Bank, *World Development Indicators* online database; Directorate-General of Budget, Accounting and Statistics, available: eng.stat.gov.tw; NBER, *Business Cycle Expansions and Contractions*, available: www.nber.org; all downloaded 10 September 2007.

Click here for figure data

1.1.7 Average interregional business cycle correlations

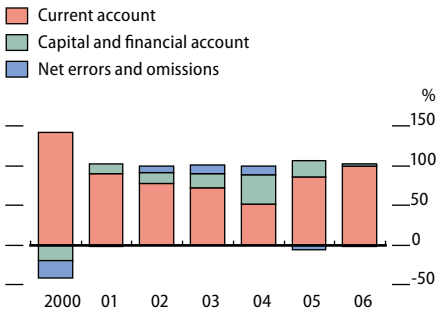


Note: Asia comprises People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei,China; and Thailand. G3 comprises United States, Japan, and euro zone.

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

Click here for figure data

1.1.8 Share in overall balance of payments



Note: Data refer to Bangladesh; People's Republic of China; Hong Kong, China; India; Indonesia; Republic of Korea; Malaysia; Pakistan; Philippines; Singapore; Taipei,China; and Thailand.

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

Click here for figure data

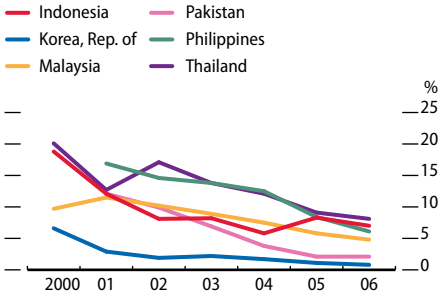
for more data to be brought to bear on the analysis. But the striking differences in apparent spillovers over these phases caution against drawing simple inferences. Looking for regularities in the time series data for the US and developing Asia, IMF (2007) concludes that disturbances to US growth have had significant effects on the newly industrialized economies and the ASEAN-4; but also that impacts have been comparatively short-lived. Dees and Vansteenkiste (2007) conclude that the US and Asian business cycles are largely independent of one another. Given the presence of the PRC in their sample, and its uninterrupted growth over the past 25 years, as well as the violent effects of the Asian crisis on regional growth in the second half of the 1990s, this finding is perhaps not so surprising. But if spillovers really do behave differently between upturns and downturns, and are particularly potent during recessions, it is not clear what can be inferred from averages culled from expansions, contractions, and tranquil periods.

Asian Development Outlook 2007 (in the chapter, *Uncoupling Asia: Myth and reality*), provides another perspective on business-cycle synchronization. It observes that the early 1990s presents strong evidence of detachment of developing Asia from the G3 (US, Japan, and euro zone). But there is also evidence of a pronounced structural break following on the heels of the Asian crisis. Since the crisis, it would seem that there has been much closer synchronization of the Asian and G3 business cycles (Figure 1.1.7). Correlations between PRC and G3 business cycles are weaker. The postcrisis data confirm that the G3 business cycle leads movements in output in developing Asia at intervals of 1 to 3 years. Lying behind these findings might be the strong dependence on export-led growth in the postcrisis period, deepening financial market integration, and indeed, improved policies that have helped promote greater stability. However, intriguing as these findings may be, they do not provide a basis for robust prediction.

Another way of trying to understand how growth in developing Asia might respond to shocks in the US is to apply simulation techniques using models of the global economy. IMF (2007) reports exercises using its global economic model. It finds impacts that are not very different from the numbers calibrated from event studies. In a recent ADB study, Park (2007) uses Oxford Economics' global economic model to examine scenarios in which there is a hypothetical US slowdown, and traces possible impacts on developing Asia. (These scenarios are illustrative and should not be regarded as forecasts.)

Three hypothetical situations are considered in the ADB study. It is assumed, first, that a contraction in US demand leads to a 1 percentage point fall in US output growth and that this downturn endures for 2 years. This lowers output growth in developing Asia by 0.45 percentage points in the first year and by 0.75 percentage points in the second. Second, a 10% depreciation of the US dollar (against all currencies other than the Hong Kong dollar, which is linked to the US dollar) is assumed to occur in tandem with the assumed deceleration in US growth. Now growth in developing Asia slows by close to 2% in each year. In such an event, a depreciation of the US dollar might be needed to stimulate growth in a context of weaker domestic demand in the US. Third, the hypothetical shock to US growth occurs together with an assumed 10%

1.1.9 Nonperforming loan ratio



Sources: CEIC Data Company Ltd.; Bank Negara Malaysia, available: www.bnm.gov.my; State Bank of Pakistan, available: www.sbp.org.pk; all downloaded 8 September 2007.

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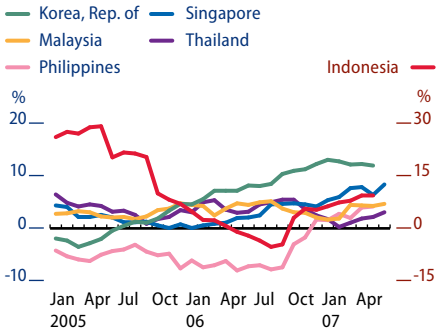
1.1.10 Growth in private sector bank credit



Sources: CEIC Data Company Ltd.; International Monetary Fund, *International Financial Statistics* online database; both downloaded 8 September 2007.

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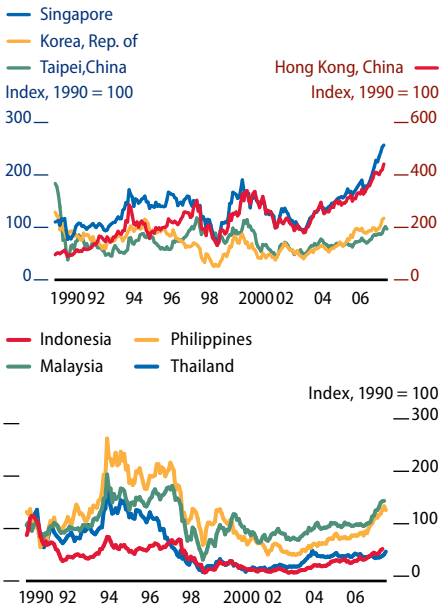
1.1.11 Real equity prices



Sources: CEIC Data Company Ltd.; International Monetary Fund, *International Financial Statistics* online database; both downloaded 8 September 2007.

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decline in investment in the PRC. With deteriorating prospects for growth and trade, there could be cuts in investment spending in the PRC both by domestic and by foreign investors. In the remainder of developing Asia, GDP growth now slows by 0.8 percentage points in year one and by 0.9 percentage points in year two.

Downside risks

Together the evidence from past slowdowns, available statistical findings, and the results of modeling simulation exercises suggests that developing Asia would certainly feel the tremors from a US recession, though these are likely to be modest and short-lived. Even if the worst experiences of the past 35 years were replayed, the attrition of growth is unlikely to be severe.

If a recession of recent median depth and duration occurred in the US—an event that has a low but rising probability—a deceleration of growth in developing Asia by 2 percentage points would be at the upper end of plausible estimates for effects of the spillover, with a central prediction closer to 1 percentage point. Depending on timing, this could possibly prune growth to a range of 6–7% from the baseline prediction of 8.2% in 2008.

To the extent that past events provide a reliable guide, they suggest that the magnitude and speed of impacts will be critically affected by exchange rate adjustments (as illustrated in Park's [2007] simulations), by impacts on primary commodity prices, and by any spillovers from the US to the wider global economy. If evidence of a synchronized and sharp slowdown across the G3 were to appear—again, something considered unlikely—this could make a significant dent on growth in developing Asia.

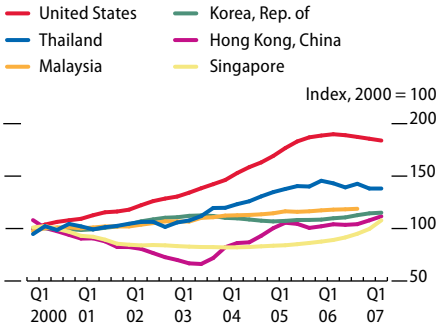
Country-level impacts

At a country level, susceptibility to spillovers from a sharp US downturn would depend on a variety of factors. The buildup of reserves that has occurred across the region certainly provides a strong buffer against external shocks (see Box 1.1.2, *Developing Asia's foreign exchange reserves and the United States merchandise trade deficit*). However, those economies that have built reserves through current account surpluses are in a stronger position than those that have experienced reserve growth through capital inflows. Any capital flight could deplete reserves as investors leave for safer havens. Fortunately, for most economies in developing Asia, current account surpluses have been the primary driver of reserves, though for India (where cover is still ample), and periodically for some other economies, capital inflows have been important (Figure 1.1.8).

Likewise, vulnerabilities have retreated with improved health of domestic financial systems. The quality of banks' assets and their capital strength have been boosted (Figure 1.1.9). The corporate sector too has reduced its exposure to debt (Figure 1.1.10).

Asset valuations generally are in line with fundamentals. It is true that equity prices in developing Asia have enjoyed strong growth since 2004, but this should be seen in the context of quite modest performance over a longer stretch of time (Figure 1.1.11). Property markets are also making a comeback, but valuations have not soared as in some industrial countries, nor have credit risks become elevated in the way that they have in the US (Figure 1.1.12).

1.1.12 Selected residential property prices



Source: CEIC Data Company Ltd., downloaded 8 September 2007; www.realtor.org/Research.nsf/Pages/MetroPrice, downloaded 15 September 2007.

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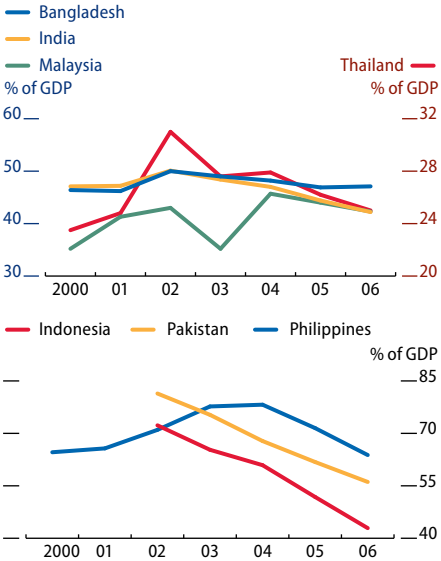
1.1.13 Public sector debt



Sources: Bangladesh Bank, available www.bangladesh-bank.org; Government of India, Ministry of Finance, available: finmin.nic.in; Bank Indonesia, available: www.bi.go.id/web/en; Government of Indonesia, Debt Management Office, available: dmo.or.id; Singapore Ministry of Trade and Industry, available: app.miti.gov.sg/; Bank of Thailand, available: www.bot.or.th; CEIC Data Company Ltd; International Monetary Fund, *Pakistan: 2006 Article IV Consultation,* Staff Report, available: www.imf.org; all downloaded 10 September 2007.

Click here for figure data

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

Developing Asia's foreign exchange reserves rose by about $360 billion in the first half of 2007 to $2.6 trillion, according to preliminary data (box table). This advance was about two-thirds larger than the $217 billion increase in the same period of the previous year.

This continues a pattern of large gains made by the region since 2001 (Box figure 1), and developments through June suggest that 2007 will see the largest increase to date. All but one of the economies in the region made reserve gains, with the People's Republic of China (PRC) accounting for about 74% of the rise as its current account surplus strengthened. India accounted for about 10% of the increase, reflecting its larger capital account surplus.

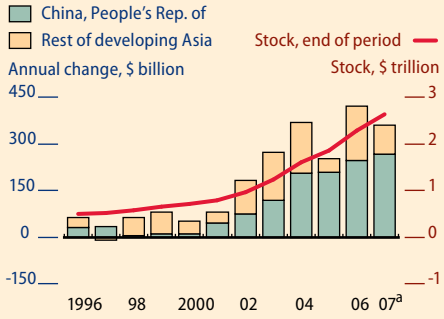
With $1,332.6 billion as of end-June 2007, the PRC holds about 50% of developing Asia's foreign exchange reserves. The next five largest holders (in descending order, Taipei,China; Republic of Korea; India; Singapore; and Hong Kong, China) together hold $1,002.3 billion, or about 38% of the regional total.

Box figure 2 indicates that developing Asia's share in the United States (US) merchandise trade deficit (census basis, not seasonally adjusted), which had been essentially stable since 2001, increased at a faster pace in the first half of 2007. The US trade deficit with developing Asia amounted to $157.4 billion, or 42.1% of the US total ($373.6 billion), up by 5.2 percentage points from the first half of 2006.

The US trade deficit with the PRC widened by about 15% in January–June 2007 from the prior-year period, to $117.5 billion, while other developing Asian economies' trade surplus with the US fell by 8.3% to $39.9 billion.

The PRC has expanded its share of the regional surplus over the years (about 75% in 2007 versus 51% in 2000), reflecting both its emergence as a low-cost producer of manufactured goods, and the growth of intraregional trade (the latter features exports of components and supplies to the PRC for assembly into goods for export, including to the US).

1 Developing Asia's foreign exchange reserves

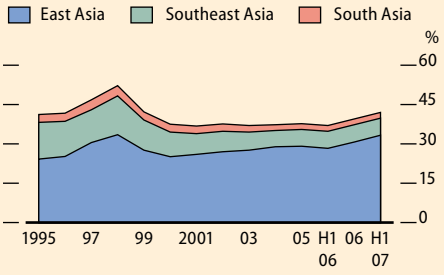


[a] First half.

Sources: International Monetary Fund, *International Financial Statistics* online database; www.cbc.gov.tw; Bank of Korea, available: www.bok.or.kr; all downloaded 3 September 2007.

Click here for figure data

2 Developing Asia's share in the US merchandise trade deficit



Note: Shares of Central Asia and the Pacific are negligible.

Source: US Census Bureau, available: www.census.gov, downloaded 3 September 2007.

Click here for figure data

Developing Asia's foreign exchange reserves ($ billion)

	Stock June 2007	Change in first half of year	
		2007	2006
Central Asia	26.0	3.8	6.4
Armenia	1.2	0.2	0.1
Azerbaijan	2.8	0.3	0.4
Kazakhstan	20.9	3.2	5.8
Kyrgyz Republic	0.9	0.2	0.0
Tajikistan	0.2	0.0	0.0
East Asia	1,986.2	281.2	147.2
China, People's Rep. of	1,332.6	266.3	122.2
Hong Kong, China	136.3	3.1	2.3
Korea, Rep. of	250.2	11.8	15.3
Mongolia	1.0	0.1	0.2
Taipei,China	266.1	-0.1	7.1
South Asia	230.8	40.3	27.5
Bangladesh	5.0	1.2	0.6
Bhutan	0.6	0.0	0.0
India	206.1	35.9	25.0
Maldives	0.2	0.0	0.0
Nepal	1.6	0.0	0.1
Pakistan	14.0	2.7	1.5
Sri Lanka	3.2	0.4	0.1
Southeast Asia	394.5	34.7	35.9
Cambodia	1.3	0.1	0.1
Indonesia	49.2	8.5	5.3
Lao People's Dem. Rep.	0.4	0.1	0.0
Malaysia	90.8	9.1	8.6
Myanmar	1.2	0.0	0.2
Philippines	23.3	3.4	2.3
Singapore	143.6	7.4	11.5
Thailand	71.1	6.0	5.7
Viet Nam	13.4	0.0	2.2
The Pacific	2.2	0.2	0.2
Fiji Islands	0.2	0.0	-0.1
Micronesia, Fed. States of	0.0	0.0	0.0
Papua New Guinea	1.5	0.2	0.2
Samoa	0.1	0.0	0.0
Solomon Islands	0.1	0.0	0.0
Tonga	0.1	0.0	0.0
Vanuatu	0.1	0.0	0.0
Developing Asia	2,639.6	360.1	217.1

Sources: International Monetary Fund, *International Financial Statistics* online database; www.cbc.gov.tw; Bank of Korea, available: www.bok.or.kr; all downloaded 3 September 2007.

Responses

Public sector debt levels remain high in some countries, but have been coming down (Figure 1.1.13). The costs of servicing debt are likely to rise as increased volatility feeds through to the repricing of risks. Indeed this is already happening. During July and August, spreads on Asian sovereigns increased across the board (Figure 1.1.14) though in some cases a reassessment of domestic circumstances also played a part. Rising costs of debt servicing will hurt most where debts are already substantial. Those countries where debt levels are low and deficits are small have greater latitude to use fiscal measures to counteract any weakness coming through other channels. However, long lags in spending could mean that support kicks in just as economies are healing naturally. And if an economic slowdown led to US dollar weakening, this would ease fiscal pressures as the size of US dollar-denominated debts would shrink in local currency terms.

If unfolding evidence suggests that there are threats to growth, the scope for monetary policy adjustments will depend on circumstances. In economies where real interest rates are already very low (Figure 1.1.15), cuts may not have much impact. And in countries where there is overheating, slower growth may help reduce inflation risks. Monetary easing would make most sense where growth may slip below potential and where real interest rates are moderate. Easing would be consistent with inflation (and output) objectives provided that it is appropriately calibrated on the deflationary impulse coming from weakening external demand, and on any induced effects on domestic consumption and investment that could occur through credit and wealth channels.

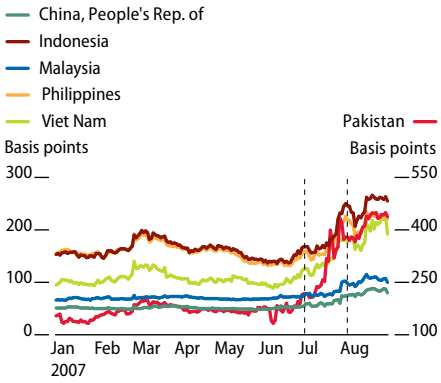
Growth prospects

Growth of 8.3% is now expected in 2007, easing gently to 8.2% in 2008 (Figure 1.1.16 and Table 1.1.1). Momentum in the PRC and India supports fast growth at the regional level. If these two countries are removed from the averages, the other economies are expected to grow by more modest averages of 5.7% in 2007 and 5.6% in 2008.

The baseline forecasts for 2007 anticipate some modest slowing in the global economy, and a mild recovery in the US through 2008. Stabilizing monetary responses seem likely. But the downside risks to growth in 2008 are elevated, and much will depend on whether distress in credit markets deepens and spills over into the wider financial system and real economy (see above).

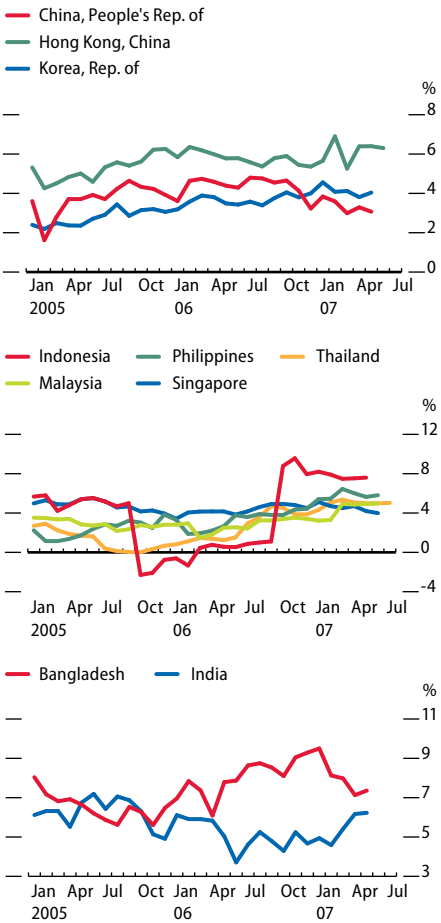
In the first half of 2007, growth in East Asia quickened, lifted by fast expansion in the PRC. Growth in the first half in the PRC was 11.5%, trending up through the second quarter. The now familiar pattern of vigorous investment spending and rapid expansion of exports underpinned growth in the PRC. Efforts by the authorities to rein back investment and export demand growth have, as yet, had limited impact. Investment administered by local governments is again growing at a fast clip, and the withdrawal in midyear of export-supportive measures may have brought forward export deliveries. Private consumption demand, as measured by retail sales, is also growing briskly, bolstered by rapidly expanding incomes in rural as well as urban areas.

1.1.14 Selected sovereign spreads



Source: Bloomberg, downloaded 10 September 2007.

1.1.15 Real lending rate



Source: International Monetary Fund, *International Financial Statistics* online database; downloaded 8 September 2007.

Click here for figure data

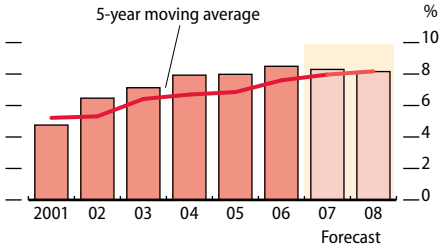
1.1.1 Selected economic indicators, developing Asia, 2006–2008

	2006	2007		2008	
		ADO 2007	*Update*	*ADO 2007*	*Update*
Gross domestic product (annual % change)					
Developing Asia	8.5	7.6	8.3	7.7	8.2
Central Asia	12.4	10.3	11.1	9.4	10.1
East Asia	9.0	8.0	8.9	8.0	8.7
South Asia	8.8	7.7	8.1	8.0	8.1
Southeast Asia	6.0	5.6	6.1	5.9	6.1
The Pacific	2.6	4.5	3.5	2.8	3.2
Consumer price index (annual % change)					
Developing Asia	3.3	3.0	4.0	3.2	3.8
Central Asia	7.9	8.6	9.7	7.9	9.1
East Asia	1.6	1.9	3.5	2.2	3.3
South Asia[a]	5.9	5.5	5.7	5.3	5.4
Southeast Asia	7.1	4.2	3.8	4.0	3.8
The Pacific	3.2	3.5	4.7	3.3	3.2
Current account balance (% of GDP)					
Developing Asia	5.8	5.0	6.1	5.0	5.7
Central Asia	4.7	3.2	3.5	3.3	3.6
East Asia	7.4	6.8	8.2	6.9	7.9
South Asia	-1.4	-2.2	-1.9	-2.2	-2.1
Southeast Asia	7.8	6.1	7.0	5.6	6.0
The Pacific	4.9	-1.2	7.3	2.0	2.3

[a] India reports on a wholesale price index basis.

Sources: Asian Development Outlook database; staff estimates.

1.1.16 GDP growth, developing Asia

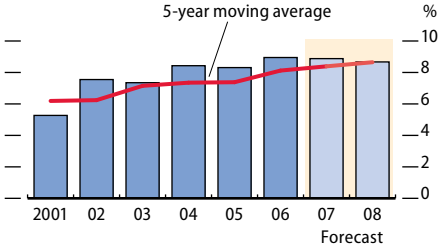


Sources: Asian Development Outlook database; staff estimates.

Click here for figure data

Growth in Hong Kong, China continues to benefit from the bristling economic activity in the PRC. In the first half, growth was 6.3% and this *Update*'s prediction is that growth in full-year 2007 will be about 6%. Though this is a little slower than recent outcomes, it is an upward revision on the March forecast of *ADO 2007*. In the Republic of Korea (hereafter Korea), underlying demand pressures have been building, prompting the authorities to unexpectedly raise interest rates in July and August. Reflecting stronger than expected exports and a pickup in consumption, estimated growth for Korea is revised up to 4.6%. In Taipei,China as well, the growth forecast is revised marginally up, mainly on the back of an increase in investment in the first half of 2007. Mongolia is benefiting from strong prices for copper and gold, warranting an upward revision of the growth projection for 2007. It is now expected that Mongolia will grow by 8%, capping 4 straight years of growth in excess of 7%. East Asia is now projected to expand by 8.9% in 2007 (Figure 1.1.17).

1.1.17 GDP growth, East Asia



Sources: Asian Development Outlook database; staff estimates.

Click here for figure data

South Asia continues to build on the progress of recent years. Growth of 8.1% is expected in 2007 (Figure 1.1.18). Potential growth rates in Bangladesh, India, and Pakistan, the subregion's largest countries, all appear to have risen and growth is also on a more stable trajectory. India enjoyed its quickest expansion in 18 years in FY2006 (ended March 2007) and industry is now spearheading growth. In the first quarter of FY2007 (i.e., April–June 2007), growth showed little let-up despite higher interest rates and a sharp appreciation of the rupee. Still, tighter monetary conditions for the rest of FY2007 will lead to some softening. It is now foreseen that India will grow by 8.5% in 2007, an upward revision to the estimate of 8.0% made in March in *ADO 2007*.

In Bangladesh, political developments continue to dominate, though on the economic front, there has been little change. The textile industry is doing well in the post-quota world and private remittances provide an important source of support for consumption and investment. However, recent measures against corruption and hoarding have added to business sector uncertainty. In Pakistan, growth is put at 6.5% in FY2008 (ending June 2008), but any adverse developments on the political and security front could have a crucial bearing on the economy. Growth of 7.0% in FY2007 (ended June 2007) was largely underpinned by expansion in large-scale manufacturing industry and in services. Remittances from Pakistan's foreign-based workers continue to provide substantial support to domestic demand.

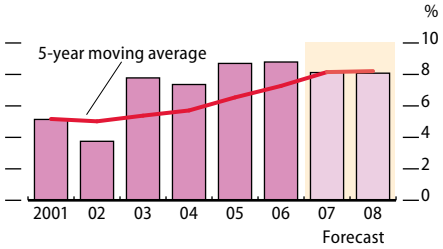
Hopes for improvement in Nepal's economic circumstances and performance have so far not been met. Indeed, this *Update* revises down the estimate for growth in FY2007 (ended 15 July 2007), to 2.5%. In Sri Lanka, real economic growth is expected to hold its course, though the macroeconomic situation continues to give cause for concern. In the Maldives, economic rhythm will return to a more settled pace following the spike in 2006 that reflected tsunami-related reconstruction activities. The completion of a large hydro-project will give a boost to the income growth of Bhutan's small economy. In Afghanistan, growth has been revised up due to a stronger than expected recovery in agriculture.

Growth in Indonesia continues to edge up and the outcome in 2007 is now expected to exceed 6%. In the first half, growth of 6.1% added to the evidence of a strengthening economy, with growth accelerating in the second quarter to 6.3%. As inflation has come down, private consumption and investment have led the way, and strength should build in the second half of the year. In the Philippines, first-half growth of 7.3% was the highest in almost 20 years. Growth was propelled by net exports, consumption spending, and by higher levels of government expenditure. On the supply side of the economy, services activity is enjoying vigorous growth but manufacturing growth and investment spending continue to lag. There has been brisk expansion in the mining sector, but from a low base. For 2007, this *Update* revises up its projection to 6.6%, on the assumption that growth in the second half will moderate from the fast pace of the first 6 months.

In Malaysia, domestic demand is supporting growth. Private consumption has grown vigorously and public sector investments in infrastructure projects added to growth in the first half of 2007. The contribution of net exports to growth in Malaysia is ebbing, and is expected to be negative this year. Viet Nam's private sector shows ever-increasing dynamism. Improvements in the business investment climate and World Trade Organization (WTO) entry have added to confidence. On the supply side, growth was almost entirely attributable to industry and services. This *Update's* forecast for growth of 8.3% in 2007 is unchanged from *ADO 2007*.

In Thailand, political uncertainty continues to sap consumer and private investment confidence. Still, in the first half of 2007 better than expected net export performance helped support growth, as did government investment spending. It is expected that Thailand's growth in 2007 will stay unchanged from the original *ADO 2007* projection of 4%.

1.1.18 GDP growth, South Asia



Sources: Asian Development Outlook database; staff estimates.

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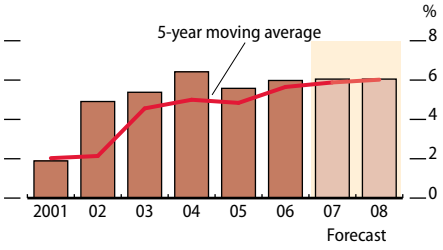
1.1.19 GDP growth, Southeast Asia



Sources: Asian Development Outlook database; staff estimates.

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Cambodia sees a marginal downward revision to its growth forecast, but the Lao People's Democratic Republic registers no change. For Southeast Asia as a whole, this *Update* uprates the projection of growth from 5.6% to 6.1% for 2007 (Figure 1.1.19).

Growth in Central Asia has again been underpinned by high prices for oil and mineral exports. Higher production and exports are adding directly to growth, but earnings are supporting domestic demand and the expansion of services. This *Update* revises up its projection for GDP growth in 2007 to 11.1% (Figure 1.1.20).

Azerbaijan and Kazakhstan are now set to grow more quickly as a consequence of larger than expected increases in oil production and exports, and stronger domestic demand. In Turkmenistan, growth is supported by larger exports of natural gas. Economic performance in Uzbekistan is improving, with higher investment and exports, and growth has steadily climbed. In the first half, it grew at 9.7% and full-year 2007 growth should be 8.0%, a significant upward revision from the estimate in *ADO 2007*. Growth in both the Kyrgyz Republic and in Tajikistan was strong in the first half of 2007. In the Kyrgyz Republic, the industry sector has bounced back from the disruptions of 2006 and 2005, and investment- and remittance-fuelled consumption has supported strong expansion in Tajikistan.

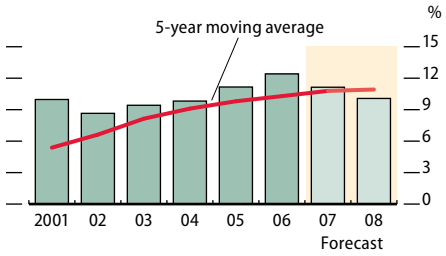
For the Pacific Islands, this *Update* downgrades the projection of growth for 2007 from 4.5% in *ADO 2007* to 3.5% (Figure 1.1.21). In large measure, this is because an expected rebound in Timor-Leste has not been as strong as had been anticipated. The economic fallout in the Fiji Islands from political events has also been more accentuated than was earlier foreseen. However, Papua New Guinea, the largest economy in the Pacific, is expected to do better.

Looking ahead to 2008, this *Update* forecasts regionwide growth of 8.2%, marginally lower than the revised forecast for 2007. Nevertheless, the central forecast of 8.2% is a substantial upward revision of the March forecast of 7.7% in *ADO 2007*. Though growth is revised up for all subregions, most of the increase is due to the upward revision for East Asia, with nearly all of that being attributed to a full 1 percentage point rise in the projection for the PRC. This *Update* now projects growth of 10.8% for the PRC in 2008, up from the 9.8% of *ADO 2007*. The reassessment of prospects for the PRC recognizes that momentum has continued to accelerate through 2007, and that it may be difficult to reverse quickly. Though measures taken to slow the economy have had limited effect so far, they should have greater purchase going forward. Elsewhere in East Asia, growth in Korea is expected to accelerate in 2008 as private consumption strengthens.

In India, growth is expected to hold steady in 2008 at or about its potential level. This projected soft landing assumes that the authorities successfully contain inflation pressures, without crimping either investment or export demand. The outlook for growth in Bangladesh, Pakistan, and Sri Lanka through 2008 is also steady, though these economies face ongoing and significant macroeconomic stabilization challenges.

In Southeast Asia, prospects may brighten for Thailand, provided that new elections deliver a government that has a credible economic program. Malaysia's growth may pick up a little from that seen in 2007, but if the

1.1.20 GDP growth, Central Asia



Sources: Asian Development Outlook database; staff estimates.

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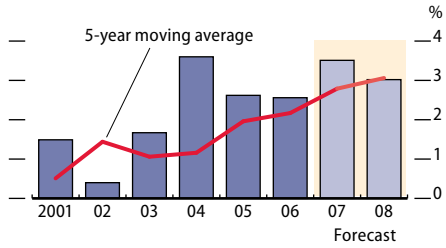
1.1.21 GDP growth, The Pacific



Sources: Asian Development Outlook database; staff estimates.

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electronics slump continues this will trim its prospects. If Indonesia can continue to make headway on restoring investor and broader economic confidence, its growth could climb further in 2008. For Southeast Asia as a whole, growth of 6.1% is expected for 2008, a slight upward revision from the March forecast of *ADO 2007*.

Prices of oil and minerals are expected to moderate in 2008, shaving growth a little in Central Asia. In 2008, growth of 10.1% is now expected. Growth projections have been revised up for the Pacific Islands. By 2008, the Fiji Islands should be expanding, if only slowly, and Papua New Guinea is expected to grow at 4.5%, boosted by earlier investments in high-grade mining activities.

As explained above, the outlook for 2008 is subject to an unusually large degree of uncertainty, with the possibility that unfavorable external developments could cause growth to slide. For the PRC, the most probable channel of transmission would be through the demand for its exports. Slower export growth would then cascade back down through regional supply chains, hitting other countries in East and Southeast Asia. Despite the limited degree of integration of the PRC's financial markets with the wider international economy, financial market contagion cannot be ruled out. Stresses might then leach into other parts of the economy. In the PRC and in some other countries, fiscal positions would provide room for stabilizing responses.

Domestic rather than external demand has been the main driving force behind India's spurt in growth. Nevertheless, industrial exports have been rising quickly and trade in services has been a mainstay of the current account earnings for some years now. Both would be negatively influenced if the temperature of the global economy were to drop.

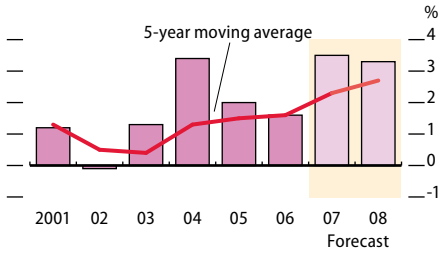
Finally, if a slowing global economy were to cause commodity prices to soften, this would trim prospects in Central Asia, and would have an effect on other economies that have enjoyed the benefits of high prices in past years.

Inflation prospects

Inflation in the PRC, which has for long been tame, picked up in the first half and by August 2007 had risen to 6.5%. Much of the inflation strain is coming from rises in food prices. Though some of these rises reflect temporary factors, food is such a big component of the consumption basket that there is a risk of rising prices spilling over into broader cost pressures. Further interest rate rises look possible as do delays in adjustments to controlled prices of fuels and other commodities.

The PRC's considerable current account surplus and strong capital inflows continue to seep into domestic liquidity, complicating monetary policy. Efforts to contain the growth of liquidity and credit continue, but so far, have had only limited impact. The PRC's equity markets surged again in the first half of 2007, largely impervious to the spasms in global markets. House prices also continued to make steady gains in many cities. Credit demand in the PRC is driven partly by the expectation of further gains in asset markets. Forecast inflation in the PRC is revised up to 4.2% from the March prediction of 1.8% made in *ADO 2007*. In Korea, concerns about rising inflation expectations prompted the authorities to

1.1.22 Inflation, East Asia



Sources: Asian Development Outlook database; staff estimates.

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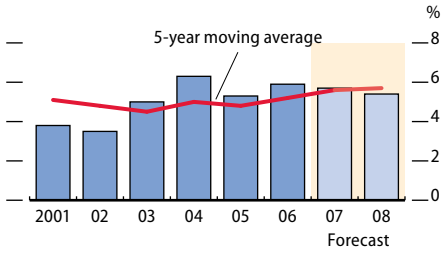
1.1.23 Inflation, South Asia



Sources: Asian Development Outlook database; staff estimates.

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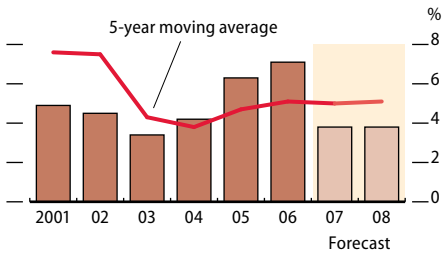
1.1.24 Inflation, Southeast Asia



Sources: Asian Development Outlook database; staff estimates.

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raise interest rates in the last couple of months. For East Asia as whole, the inflation forecast for 2007 is revised up to 3.5% (Figure 1.1.22), from the March forecast of 1.9%.

Monthly wholesale price inflation in India has come off the earlier peaks seen in the first 3 months of 2007, and since June has been within the Reserve Bank of India's target range. A combination of higher policy rates, targeted lending restrictions, appreciation of the rupee, some easing of supply-side pressures on food, and controls on the prices of fuels helped bring down wholesale price inflation to 4.5% at end-July 2007. Elsewhere in South Asia, inflation pressures are not far from the surface. Though central banks are taking tightening measures, inflation rates remain uncomfortably high in Bangladesh, Pakistan, and Sri Lanka. Credit expansion to finance government spending is making the control of inflation more difficult, particularly in Pakistan and Sri Lanka. In Nepal, a poor harvest has added to inflation. These have raised South Asia's inflation forecast for 2007 to 5.7% from 5.5% in *ADO 2007* (Figure 1.1.23).

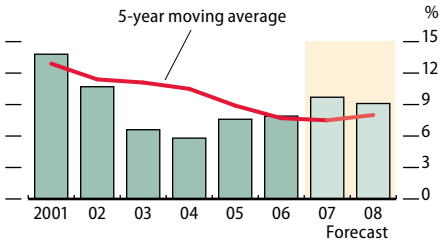
In Southeast Asia, inflation is expected to moderate further in 2007. Aggregate inflation is now seen coming down to 3.8% in 2007 from over 7% in 2006 (Figure 1.1.24). Indonesia accounts for much of this reduction. The authorities there undertook aggressive monetary tightening in late 2005 and 2006 to combat inflation pressures arising from sharp fuel price increases. But the downward revision to the subregional inflation forecast (from 4.2% in *ADO 2007*) is primarily a result of inflation falling more quickly than anticipated in Malaysia, Philippines, Thailand, and Singapore. Inflation is expected to accelerate a little in Viet Nam relative to the 2006 outcome. Buoyant demand in Viet Nam and high levels of liquidity have contributed to high and rising inflation.

Inflation is now expected to accelerate more quickly in Central Asia. The *ADO 2007* forecast of 8.6% for 2007 is revised up to 9.7% (Figure 1.1.25). A major contributor to this pickup is Azerbaijan, where oil revenues are boosting spending. However, a more general pattern of modest upward revisions is discernible. Strong foreign exchange inflows and higher public spending are lifting inflation rates.

In the Pacific Islands, inflation forecasts are revised up. This is largely due to higher forecast inflation for Papua New Guinea. The local currency, the kina, has depreciated and pass-through of earlier oil price rises continues. Inflation in the Pacific Islands is now expected to average 4.7% in 2007, up from the forecast of 3.5% in *ADO 2007* (Figure 1.1.26).

Developing Asia's prospects for inflation (Figure 1.1.27) as well as for output growth in 2008 are complicated by the uncertainty shrouding the global economy. In the baseline, it is expected that inflation will moderate a little over 2007 levels. If growth turns out to be slower than anticipated, inflation could come down more quickly. On a subregional basis, reductions in inflation are expected in East Asia, South Asia, Central Asia, and in the Pacific; but in Southeast Asia, inflation will remain steady.

1.1.25 Inflation, Central Asia



Sources: Asian Development Outlook database; staff estimates.

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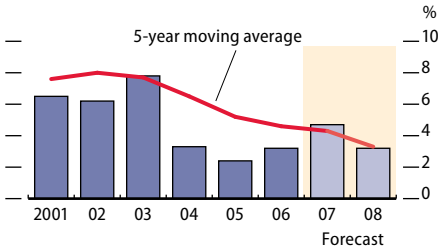
1.1.26 Inflation, The Pacific



Sources: Asian Development Outlook database; staff estimates.

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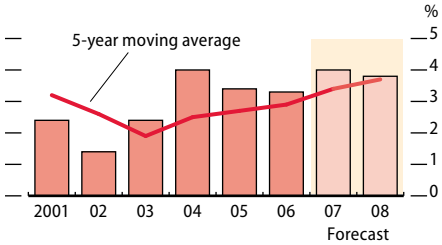
1.1.27 Inflation, developing Asia



Sources: Asian Development Outlook database; staff estimates.

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Balance-of-payments prospects

As a percentage of GDP, developing Asia's current account balance is expected to show little change on 2006's outcome. The revised estimate

of this *Update* is that the current account surplus in 2007 will be 6.1% of regional GDP, compared with 5.8% in 2006 (Figure 1.1.28).

In 2007, only South Asia is expected to have a current account deficit (Figure 1.1.29). India's deficit will probably be larger than in 2006, but has been revised down from the estimate in *ADO 2007's* March forecast. A widening deficit in merchandise goods trade is being partially offset by significant earnings on the services account from software exports, back-office services, and remittance income.

Pakistan's deficit, which is now estimated to expand to 5.2% of GDP, reflects its widening trade gap, as exports from its textiles and clothing sector are pressured by more intense global competition. Though remittance income remains strong, it is insufficient to offset Pakistan's trade deficit. Growing remittances more than finance Bangladesh's trade deficit, and it is now estimated to post a current account surplus of 1.4% of GDP in 2007. In Sri Lanka, the current account deficit is expected to narrow, following the jump in 2006 as rapid growth in imports sparked by tsunami reconstruction efforts have moderated.

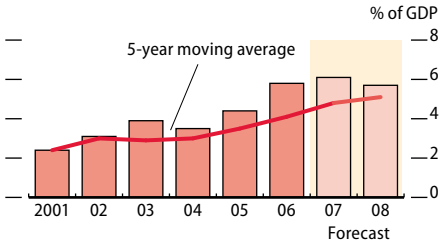
The current account surplus in East Asia for 2007 is now projected at 8.2% of GDP, an increase over the surplus in 2006 (Figure 1.1.30). All economies in East Asia are in surplus. The surplus in the PRC is expected to widen to 10.9% of GDP in 2007 as exports continue to outrun imports. Likewise, Hong Kong, China and Taipei,China are also expected to post large surpluses in 2007. In Hong Kong, China, strong services performance, linked to continued expansion in the PRC, underpins the current account surplus. In Taipei,China, export performance has been strong in the first 6 months, validating the *ADO 2007* projection. For Korea, the narrow current account surplus predicted in *ADO 2007* has been revised up, reflecting stronger exports. A small surplus of 0.6% of GDP is now predicted. Mongolia's expected surplus holds firm at 2% of GDP.

The consolidated current account surplus for Southeast Asia is expected to come off its recent peak. Compared to a surplus of 7.8% of GDP in 2006, the surplus in 2007 is now predicted at 7% (Figure 1.1.31). Surpluses for Indonesia and Malaysia are both expected to shrink, and in the case of Malaysia by more than 4 percentage points of GDP (though from a very high base). Nevertheless, there have been general upward revisions to the forecasts made in *ADO 2007* in March. Thailand's strong export performance is expected to lift its surplus to 3% of GDP in 2007 and Singapore's strong surplus is expected to continue its upward drift. Viet Nam's current account deficit is expected to widen sharply in 2007 as a result of rapid growth in imports of raw materials, and intermediate and capital goods, and a decline in oil exports.

There is little change in the projection of the current account position of Central Asia. This *Update* projects a surplus of 3.5% of GDP (Figure 1.1.32) as against 3.2% in the March estimate of *ADO 2007*. It is expected that a larger projected deficit for Tajikistan, reflecting increased spending on capital imports coupled with sluggish aluminum exports, will be more than counterbalanced by a larger surplus for Turkmenistan driven by strong exports of gas.

For the Pacific, this *Update* incorporates an estimate for Timor-Leste's current account position in 2007. The large surplus reflects a surge in oil and gas revenues as production from existing fields increases. Compared

1.1.28 Current account balance, developing Asia



Sources: Asian Development Outlook database; staff estimates.

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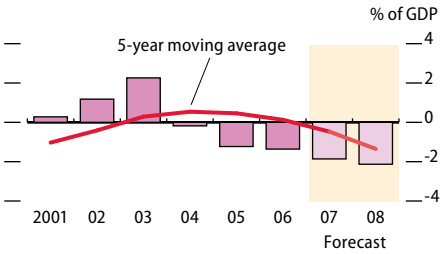
1.1.29 Current account balance, South Asia



Sources: Asian Development Outlook database; staff estimates.

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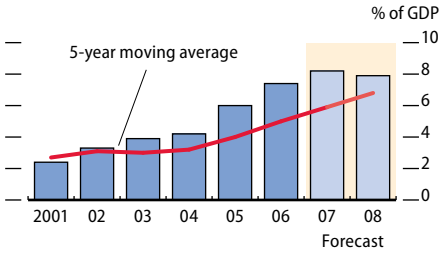
1.1.30 Current account balance, East Asia



Sources: Asian Development Outlook database; staff estimates.

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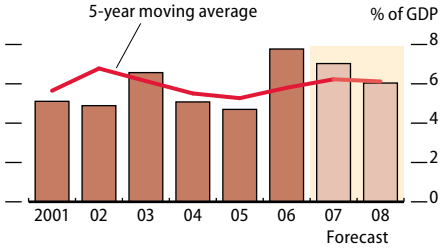
1.1.31 Current account balance, Southeast Asia



Sources: Asian Development Outlook database; staff estimates.

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with 2006, the Pacific's current account surplus is estimated to rise to 7.3% of GDP (Figure 1.1.33). Excluding Timor-Leste, the forecast for the Pacific's current account deficit is revised upward to 5.2% of GDP from 1.2% in *ADO 2007*, mainly resulting from a larger projected deficit for the Fiji Islands, where political and security concerns are expected to reduce official transfers and tourism receipts.

The outlook for the current account of the balance of payments in 2008 is for an aggregate surplus of 5.7%. At a subregional level, the surpluses in East Asia and Southeast Asia are projected to decline. Faster economic growth and stronger demand should reduce the surplus in Indonesia and Thailand. Malaysia's surplus may track down if the price of its primary commodity exports soften and the recovery in electronics activity is slow. In East Asia, it is expected that the PRC's surplus will decline slightly to 10.5% of GDP in 2008. Finally, if slower growth in the global economy were to occur in tandem with an appreciation of regional currencies, this would tend to erode the region's current account surplus moving into 2008. Softer prices for oil and minerals would trim export earnings, particularly in Central Asia but also in some other countries.

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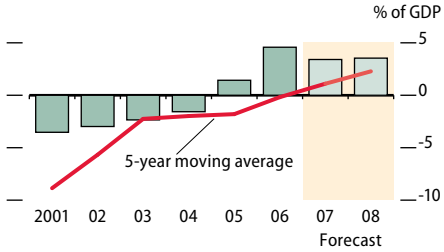
1.1.32 Current account balance, Central Asia



Sources: Asian Development Outlook database; staff estimates.

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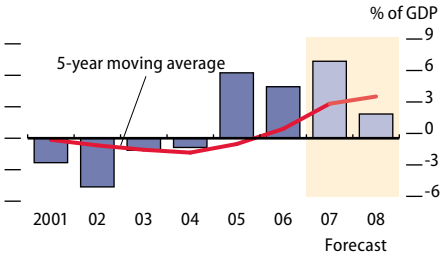
1.1.33 Current account balance, The Pacific



Sources: Asian Development Outlook database; staff estimates.

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World economy

United States

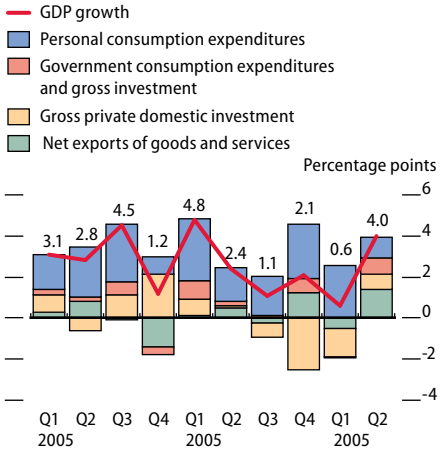
Boosted by strong expansion in business investment, public spending, and net exports, growth in the second quarter of 2007 accelerated to 4.0% (quarter on quarter, seasonally adjusted annualized rate) from a tepid 0.6% in the first (Figure 1.2.1). But the persistent housing slump remains a major risk to economic performance. For the sixth consecutive quarter, private residential investment contracted. On a 12-month moving average basis, housing starts have been declining since April 2006 (Figure 1.2.2), but the inventory of unsold homes is still high. With this overhang, and rising defaults and foreclosures among subprime mortgage-holders continuing to depress the housing market, house prices are likely to drop further (Box 1.2.1).

Facing subprime mortgage anxieties, many US consumers have lost confidence: the August consumer confidence reading dipped to its lowest in a year. Personal consumption expenditures grew by only 1.4% in the second quarter, slowing sharply from 3.7% in the first. Real disposable personal income, too, barely increased in the second quarter, and a pickup in gasoline and food prices depressed spending on nondurable goods. Consumers also face increasing headwinds from falling home prices, rising interest burdens, and slowing employment opportunities. In addition, recent weakness in equity markets associated with the subprime disruptions could add to consumer woes.

On the upside, the strong second quarter rebound reflects underlying strength in corporate spending and resilient business activity. The recovery of corporate profits in the first half of the year set the stage for ongoing improvement of nonresidential investment. Industrial production continued to improve, albeit at a moderate pace, and robust export demand has provided a cushion against slowing consumer spending. Combined with lower inventory levels, additional production should help sustain corporate momentum. This relatively benign business climate is helping hold up the job market: unemployment has stayed low at about 4.5% since the last quarter of 2006, although the July data showed a mild uptick to 4.6%.

Slower growth has helped keep price pressures at bay, with inflation at 2.4% in July. But although core inflation (excluding food and energy prices) remained tame, the headline figure accelerated to an annualized rate of 4.5% for the first 7 months of 2007, compared with an increase of 2.5% for the whole of 2006. Given insipient inflation pressures, the Federal Reserve held overnight rates steady at 5.25% in the wake of August's financial turbulence. It did, though, lower the discount rate on 17 August—the rate charged on direct Federal Reserve loans to banks—providing the necessary liquidity to banks that sought it. Markets now expect that the Federal Reserve will lower interest rates, reflecting the impact of tightening credit market conditions on demand. (Figure 1.2.3).

1.2.1 Contributions to growth (demand), United States



Source: US Bureau of Economic Analysis, available: www.bea.gov, downloaded 31 August 2007.

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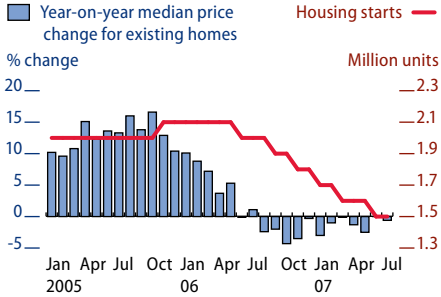
1.2.2 Housing indicators, United States



Sources: CEIC Data Company Ltd.; National Association of Realtors, available: www.realtor.org; US Census Bureau, available: www.census.gov; all downloaded 31 August 2007.

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1.2.1 Credit market disruptions

Distress that had been building in the United States (US) subprime mortgage market since 2006 spilled over into global credit markets in August 2007. Though some normalcy appears to be returning to markets, it is still difficult to tell how disruptive these developments may eventually turn out to be. Credit risks have been repriced, volatility has increased, and investor and consumer confidence has been jolted. If troubles were to deepen in the US housing market and greater credit market problems surfaced, this could aggravate and spread the malaise.

The root of the problem

The genesis of the current subprime mortgage distress can be traced back to the US housing boom. Riding it in 2001–2005, US residential mortgage lending saw rapid growth with an increasing portion made to borrowers with less than perfect credit histories—hence the term "subprime."

Subprime borrowers are charged much higher interest rates than prime borrowers (to compensate for their higher default risks) and their mortgages are often at adjustable (rather than fixed) rates. But booming housing markets, against a backdrop of historically low interest rates and increasing competition among mortgage lenders, induced lenders to relax their loan conditions.

A proliferation of new types of mortgages—also known as "affordability products," which required little or no downpayment and with initial "teaser" interest payments that were set very low—also allowed subprime borrowers to gain easier access to credit. As a result, the subprime mortgage market grew rapidly after 2003—according to some estimates, to as much as one fifth of new mortgages by 2006, from just below one tenth in 2003.

As the Federal Reserve began to raise its policy rates after July 2004 and the US housing market cooled, homeowners—particularly those with adjustable-rate mortgages—faced rising interest payments. Among subprime borrowers especially, monthly loan payments rose sharply as the initial low rates were reset to higher, normal rates. Those with shaky credit histories and little accumulated housing equity also found it increasingly hard to refinance their mortgage on better terms or to pay it off by selling their home.

Consequently, delinquencies on subprime mortgages picked up significantly after mid-2005, to nearly 15% of subprime adjustable-rate mortgages in the first quarter of 2007, compared with about 10% 2 years earlier (according to the US Mortgage Bankers Association). The number of foreclosures also doubled over the same period.

Rising defaults and foreclosures eroded the value of subprime mortgage debts and securities collateralized by them. This hit subprime lenders directly. Some 20 mortgage lenders have reportedly shut down or filed for bankruptcy in the past few months. Many smaller subprime lenders operating on very thin margins have also gone bankrupt, as the lending business has slowed and as the value of mortgage loans in the secondary market has declined. Investors in mortgage-related securities, especially those exposed to subprime loans, have suffered significant losses as well.

Avenues of contagion

Deterioration in the credit quality of subprime mortgages has spread quickly to broad asset classes held by a wide spectrum of investor groups around the globe. The source of contagion has been a boom in credit derivatives, such as collateralized debt obligations (CDOs). CDOs arise from a pool of debts, including subprime mortgage debts. This pool is then partitioned into different "tranches" representing different degrees of risk and sold off to investors with different risk appetites.

Unlike typical mortgage-backed securities, which pool only mortgage debts, CDOs bundle various types of debt into securities structured in such a way that losses from defaults are borne successively, in their entirety, from low-ranking through to high-ranking tranches, thus protecting the latter from the immediate loss. CDO tranches are then awarded credit ratings based on the layers of protection given to each tranche by the subordinate (i.e., lower) tranches as well as on the credit quality of the underlying collateral.

In this process, these structured securities are effectively severed from the credit risk of the original issuer of collateralized debts and rely solely on their own credit ratings. This means that a CDO tranche that includes unrated "junk" assets in its mix of assets used as collateral could still be "AAA-rated." Such a lack of transparency about the exact nature of the underlying collateral and credit quality behind CDOs amplified the August market sell-off amid widespread credit concerns.

Typically, prime mortgages have been pooled, repackaged, and sold to financial intermediaries, which still account for the majority of mortgage-backed securities in the secondary mortgage market. Financial innovation using securitization and credit derivatives, however, has allowed mortgage lenders to sell the riskier portion of mortgage loans to a widespread group of financial institutions. International demand for these securities has been very strong. In an environment awash with liquidity, institutional investors, including pension funds, insurance companies, and highly leveraged hedge funds, bought these securities for their relatively high returns.

1.2.1 Credit market disruptions *(continued)*

Estimated losses from defaulting subprime loans are large in absolute terms, but are limited relative to the size of the market. Although growing rapidly, subprime mortgages account for only about 15% of total outstanding mortgage loans in the US, which is estimated to be about $10 trillion (Agarwal and Ho 2007).

If 30% of these subprime loans default (or twice as high as the current delinquency rate) and banks can recoup only 60% of their loan values (implying a house price fall of nearly half), potential losses could be as high as $180 billion. Yet this would still account for less than 2% of the total US mortgage market and less than 0.5% of US consumer wealth.

Credit quality deterioration could, though, spread beyond subprime mortgages to other mortgages and consumer credit markets. As adjustable-rate mortgages—prime or subprime—become reset over the next couple of years, higher interest payments may put more mortgage-holders under pressure. Delinquency rates on "Alt-A" mortgages, which fall between the prime and subprime categories, are starting to climb. Recent tightening in regulatory standards for mortgage lending, in a context of flat or falling home prices, is also expected to exacerbate problems, at least in the short run. As refinancing conditions turn tougher, existing borrowers are left with little recourse for cash, leading to a greater number of defaults and foreclosures. Higher defaults are also feared in subprime credit card markets as households become strapped for cash.

Direct exposure to the subprime mortgage market might be limited in its total amount, but has been diffused among a wide range of investor groups. More than half total mortgage loans have been securitized and sold to broader investor groups including banks, insurance companies, pension funds, and other institutional investors. The estimated amount of US residential mortgage-related securities reached about $5.8 trillion in January 2007, out of which $850 billion was held by non-US investors (IMF 2007).

Banks and other financial institutions could suffer more losses as credit ratings on mortgage-related securities start to reflect the deterioration in credit quality of the underlying collateral. Losses are likely to be concentrated among the holders of the riskier portion of the securitized interests, such as low-ranking tranches of CDOs.

As credit quality of mortgages worsens, credit ratings for mortgage-related securities drop, which will trigger investors to reappraise these securities at market value (the "mark-to-market" practice). This process normally takes some time, as not all delinquent loans default and lead to foreclosure, a legal procedure that lasts longer than a year. However, highly leveraged investors, such as hedge funds, have already come under pressure. In the midst of heightened uncertainty, investors in and lenders to hedge funds demand more cash and collateral, forcing hedge funds to liquidate their holdings and realize losses.

Reappraisal of credit risks has also affected global stock and bond prices. Stock prices of banking and financial institutions have plummeted. Heightened risk aversion has also led global investors to retreat from risky assets, including those in emerging markets. As investors begin to require higher compensation for assuming risk, high-yield, high-risk corporate bond spreads have widened sharply. With share prices falling and credit conditions tightening, firms will face tougher financing conditions for new investment. Consumer and business confidence are also slipping.

References

Agarwal, S., and C.T. Ho. 2007. "Comparing the Prime and Subprime Mortgage Markets." Chicago Fed Letter No. 241. The Federal Reserve Bank of Chicago. August.

International Monetary Fund (IMF). 2007. *Global Financial Stability Report*. Washington, DC. Available: www.imf.org.

Broadening global expansion and a weakening dollar have boosted exports, while import growth has slowed. The contribution of net exports to growth turned positive in the April–June quarter. With slowing growth of domestic demand, the growth of exports is expected to continue to outpace that of imports. Nevertheless, given base effects, the trade deficit has persisted. In January–June 2007, the seasonally adjusted deficit reached $352.7 billion, down only by $29.5 billion from the same period a year earlier. There was a smaller deficit in goods trade and a larger surplus in services trade.

Government spending expanded robustly in the second quarter, but planned improvements in the fiscal situation seem to be on track. Tax receipts continue to rise, reducing the projected fiscal deficit (excluding the surplus income on the social security trust fund) for 2007 to 3.1%

of GDP from 3.3% in 2006. For 2008, the fiscal deficit is projected to be maintained at 3.1%.

All these influences point to 1.9% growth in GDP in 2007, followed by an investment-led recovery to 2.6% in 2008. But risks are tilted to the downside. The housing market slump is unlikely to quickly reverse and seems to have longer to run. This is likely to affect personal consumption spending. The Federal Reserve's expected interest rate cut (or cuts) may ease some of the housing pain and are likely to provide an additional boost to future investment spending.

Japan

Economic growth experienced a significant setback in the second quarter, but a moderate expansion for the year as a whole is still expected. Second quarter GDP growth in 2007 turned to a negative 1.2% (quarter on quarter, seasonally adjusted annualized rate), in contrast to the first quarter's strong outturn of 3.0% (Figure 1.2.4). But on a year-on-year basis, this still represented a moderate expansion of 1.7%, although down from 2.6% in the previous quarter.

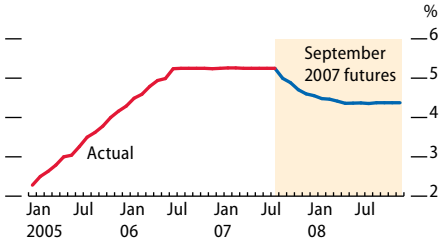
A sharp fall in corporate spending has been the main reason behind the second quarter's setback. Private nonresidential investment, which had been the key driver of the economic recovery over the past few years, fell by 4.8% again after a 0.8% decline in the first quarter. Although business investment tends to be the most volatile component of GDP, increasing economic uncertainties, associated with moderating export growth and the prolonged downcycle of the global high-tech industry, appear to have weighed on investor sentiment.

On the upside, however, corporate profits remain strong. Generally robust export growth so far this year has also tightened capacity constraints both in terms of physical capital and labor. Prospects for a quick turnaround in investment growth remain supported for now on tightened production capacity and strong corporate profits. Adding to this, industrial production is making a modest recovery. Although the combination of a major shutdown in car production and the loss of significant production capacity caused by an earthquake dented industrial production in July, a steady increase in domestic and external demand is expected to support a mild rebound.

There is certainly greater dissonance over Japan's economic strength. The latest data suggest that the economy may be losing growth momentum. Increasing odds of a more severe slowdown in US growth could make a more visible impact on exports. Already, the automobile industry has suffered its second consecutive month of export decline in August. This, together with rising inventory levels and slowing machinery orders, could cut short a tentative recovery in production growth. But support can come from continued tightening in the job market. Corporate hiring is gathering pace, which will ultimately exert a positive influence on wages.

Consumers hold the key to sustained recovery. Private consumption grew by only 1.0% in the second quarter, down from 3.4% in the first. Consumer confidence has also slipped (Figure 1.2.5) as wage growth continues to disappoint, curbing the pace of consumption growth.

1.2.3 Federal Funds rate, United States



Sources: Federal Reserve Board, available: www.federalreserve.gov; FutureSource.com, available: www.futuresource.com; both downloaded 3 September 2007.

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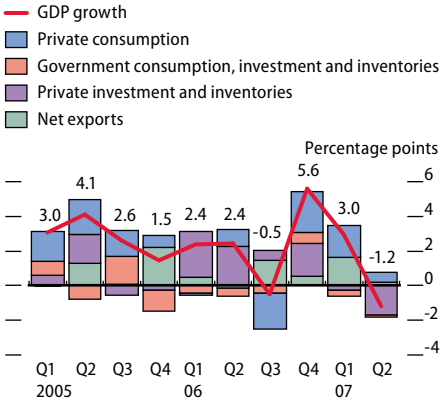
1.2.4 Contributions to growth (demand), Japan



Source: Economic and Social Research Institute of Japan, available: www.esri.cao.go.jp, downloaded 10 September 2007.

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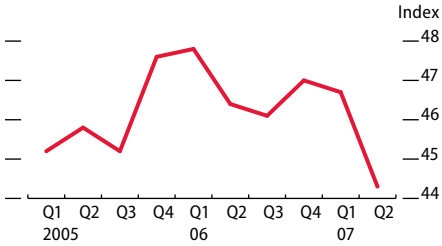
Constant efforts by firms to contain labor costs have been one factor behind the sluggish wage growth. Structural changes in the labor market from the mass retirement of baby boomers and increased participation of part-time workers have also tended to depress average wage levels, at least temporarily. But labor shortages are likely to intensify, largely for demographic reasons, putting upward pressure on wages and so eventually bolstering consumer spending.

Consumer price inflation has slid again so far this year. Although a mild upward trend in producer prices remains in place, this has been largely due to the rise in oil and commodity prices. Core inflation, which excludes fresh food prices, turned negative in February (Figure 1.2.6). With mixed signals about the strength of the economy and a potential return to deflation, the Bank of Japan has kept policy rates at 0.5% since February. The gradual pace of consumption growth, alongside weak inflation, suggests that the central bank will maintain its cautious approach into 2008.

A relatively healthy expansion should continue in Japan, with growth reaching 2.1% in 2007 and 2.2% in 2008. Corporate spending is seen resuming, given healthy export earnings, tight capacity levels, and benign funding conditions. Although consumption growth has been lagging, firming labor market conditions should gradually lift wage income and ultimately support consumer spending.

Still, there are concerns that the July earthquake and the August financial turmoil may further depress consumer and investor sentiment. Recent falls in equity and property prices have already hit consumer confidence. At the height of the global credit concerns, the yen strengthened sharply as a global reappraisal of risks triggered an unwinding of the "carry trade." If weaker US demand spreads globally and the yen (after a recent decline) resumes its rise, exports could be affected, damping business activity and corporate spending.

1.2.5 ESRI consumer confidence, Japan



ESRI = Economic and Social Research Institute of Japan.

Source: CEIC Data Company Ltd., downloaded 3 September 2007.

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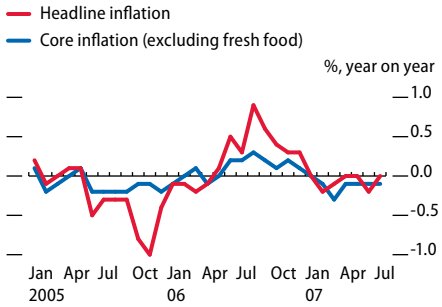
1.2.6 Inflation, Japan



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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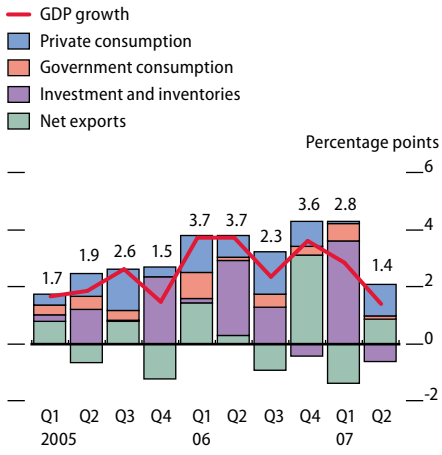
Euro zone

Growth in the euro zone remains strong, though moderating. The second quarter registered 1.4% growth (quarter on quarter, seasonally adjusted annualized rate), down from 2.8% in the first (Figure 1.2.7) due to slippages in growth of the zone's major economies—primarily Germany, France, and Italy. But underlying demand strength paints a relatively bright outlook.

Rising capacity utilization, following a strong expansion in industrial production since 2006, has encouraged corporate spending and hiring. Investment growth advanced to 9.8% in the first quarter of 2007. Although the pace has relaxed, business investment is still solid. Production capacity remains tight, while healthy corporate profits and favorable funding conditions are continuing to support capital spending. Brisk business activity has also exerted a positive influence on consumer spending through developments in the labor market. Average unemployment is dropping fast, to 7.0% in the second quarter, the lowest in a decade (Figure 1.2.8). The firmer labor market is translating into wage income growth, and should eventually provide support to consumer spending.

1.2.7 Contributions to growth (demand), euro zone



Source: Eurostat, available: epp.eurostat.ec.europa.eu, downloaded 5 September 2007.

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After a weak start to the first quarter, private consumption is recovering in the major economies. German consumer demand was hard hit by the 3 percentage point hike in value-added tax (VAT) that came into force in January. VAT now stands at 19%. Private consumption in Germany contracted in the first quarter, but early indicators such as retail sales and consumer confidence indexes point to a subsequent recovery.

Although headline inflation has fallen below the European Central Bank's target rate of 2.0%, largely due to stabilization in global oil prices early this year, inflation pressures are resurfacing (Figure 1.2.9). Less slack in production capacity and the labor market could translate into higher prices and wages. Strong job creation, alongside falling unemployment, is already strengthening workers' bargaining powers. In May, the German metal workers' union won a 4.1% rise, which may signal the beginning of broader wage increases. Robust monetary and credit growth over the past few years also remains a risk to longer-term price stability. At its 6 September meeting, the European Central Bank held its main policy rate at 4.0%. Given the strength of growth, further policy rate increases by the central bank are expected for the remainder of 2007, to keep inflation at bay.

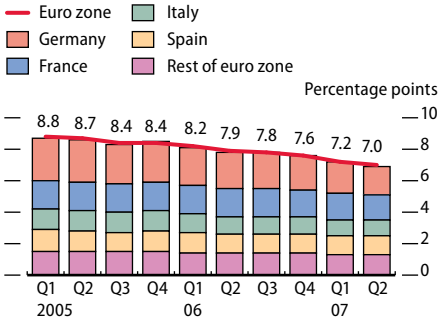
Fiscal sustainability remains a significant concern for the euro zone. Germany has made progress in this area with its January VAT increase, and Italy's efforts are also showing in its declining fiscal deficit figures. But with solid growth since mid-2005, which helped limit the rise in the government deficit-to-GDP ratio to under the 3.0% ceiling of the stability and growth pact, political pressures for greater welfare spending are rising. In France, proposed tax reforms—which include exempting overtime pay from income taxes, capping direct taxes at 50.0% of income, abolishing inheritance taxes, and making interest payments on home mortgages tax deductible—could push the fiscal deficit once more over the pact's ceiling.

The euro zone economy is expected to grow at 2.6% in 2007 and 2.4% in 2008. The outlook for consumption remains bright, with consumer confidence buoyant (Figure 1.2.10), average earnings rising, and the unemployment rate on a downward trend. In addition, proposed tax reforms in France could bolster consumption growth. A more expensive euro is affecting export performance and industrial production to a degree, but support from consumers is expected to sustain the growth momentum into 2008. Business investment should also advance at a healthy pace, given the strength of underlying demand and tightened production capacity. Although growth of industrial production has moderated, due mainly to slowing exports, a modest deceleration could be helpful for relaxing capacity constraints a little, thus easing the pressure exerted by monetary tightening.

World trade and commodity prices

After expansion of 10.2% in 2006, the volume of world trade moderated in the first half of 2007 as US demand slackened. But relatively brisk demand elsewhere continues to support world trade activity, with growth projected to reach 7.5% in 2007 (Table 1.2.1). While better than expected economic performance in the euro zone largely compensated

1.2.8 Contributions to unemployment, euro zone



Note: Data for Italy through first quarter only.

Source: Eurostat, available: epp.eurostat.ec.europa.eu, downloaded 3 September 2007.

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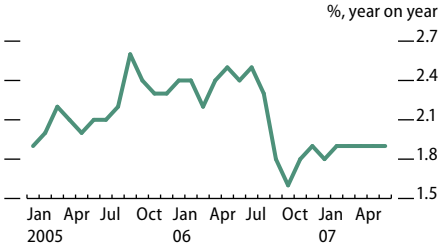
1.2.9 Inflation, euro zone



Source: Eurostat, available: epp.eurostat.ec.europa.eu, downloaded 31 August 2007.

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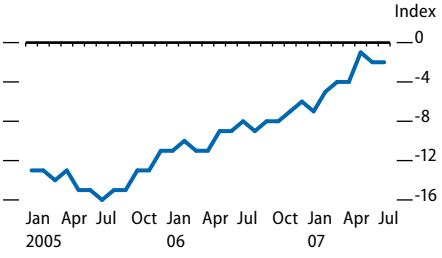
1.2.10 Consumer confidence, euro zone



Source: European Commission, available: ec.europa.eu, downloaded 31 August 2007.

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for softer demand in Japan and the US, economies in developing parts of the world continued to power ahead. The PRC registered another record in the rate of growth of industrial production, as its exports to Europe rose by more than 30% year on year in the first half of 2007. With the PRC playing a leading role as an assembly, processing, and reexporting hub, and with tight backward linkages to the rest of developing Asia, regional partners' exports to the PRC again rose strongly.

A weakening in US high-tech equipment demand, however, took a toll on industrial production across East and Southeast Asia (apart from the PRC). Growth in worldwide sales of semiconductors, a proxy for global high-tech sales, declined to 2.1% in the first 6 months of 2007 compared with 8.7% in the same period of 2006, as shipments to the US contracted by 8.8%. Growth of semiconductor sales in the Asia-Pacific region also fell by more than half to 5.9%, comparing the two periods. Monthly growth of semiconductor sales (in 3-month moving average terms) shows that the downward trend may not yet be over (Figure 1.2.11). The book-to-bill ratio (also in 3-month moving average terms), an indicator of orders vis-à-vis deliveries that precedes global activity by 6–9 months, has also slid for two consecutive months, to 0.84 in July, implying that the slump could stretch further through the rest of the year and into early 2008.

Falling unit prices have accelerated the downswing in the global high-tech industry. Prices of major memory chip units, such as dynamic random access memory (DRAM), have tumbled on fierce global competition and excess inventories (Figure 1.2.12). A rapid expansion in manufacturing capacity over the past few years has contributed to a buildup in inventories. While falling chip prices are weighing down revenue growth, inventory adjustments in the high-tech industry have squeezed production. Reflecting persistent price declines, the Semiconductor Industry Association sharply revised down its 2007 forecast for global semiconductor sales growth to 1.8% in June, from its February projection of 10%.

Global oil prices have risen again, on robust demand and renewed supply interruptions. Benchmark Brent crude, having stabilized at about $60 per barrel in the first quarter of 2007 from last year's peak of nearly $80, hit almost $80 per barrel in early September on the back of supply concerns arising from lower than expected US inventory levels, and severe weather disturbances. Oil demand has been driven in part by strong demand from the PRC and India, and in part by better than expected global economic performance. But the supply side has seen

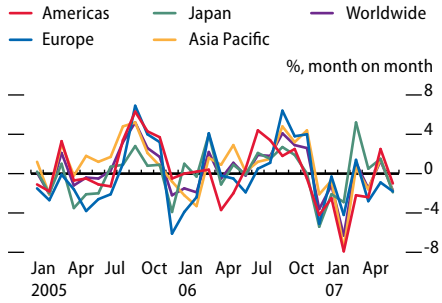
1.2.1 Baseline assumptions for external conditions, 2005–2008

	2005 Actual	2006 Actual	2007 ADO 2007	2007 Update	2008 ADO 2007	2008 Update
GDP growth (%)						
Industrial countries [a]	2.3	2.7	2.3	2.2	2.6	2.5
United States	3.1	2.9	2.5	1.9	3.0	2.6
Euro zone	1.5	2.7	2.2	2.6	2.1	2.4
Japan	1.9	2.2	2.0	2.1	2.3	2.2
Memorandum items						
US Federal Funds rate (%, average)	3.2	5.0	5.1	5.2	4.9	4.7
Brent crude oil spot prices ($ per barrel, annual average)	54.4	65.4	57.0	64.0	54.0	65.0
Nonfuel commodity prices (% change) [b]	13.4	24.7	-4.5	12.4	-8.4	-3.0
CPI inflation (OECD, annual average)	2.5	2.6	2.1	1.9	2.0	2.0
World trade volume (% increase)	7.6	10.2	7.5	7.5	8.0	8.0

[a] Growth rates for industrial countries are a GDP-weighted average for the US, euro zone, and Japan.
[b] World Bank's non-oil commodity price index.

Sources: US Bureau of Economic Analysis, available: www.bea.gov, downloaded 31 August 2007; Economic and Social Research Institute of Japan, available: www.esri.cao.go.jp, downloaded 10 September 2007; Eurostat, available: epp.eurostat.ec.europa.eu, downloaded 5 September 2007; CEIC Data Company Ltd., downloaded 31 August 2007; World Bank, *Commodity Price Data (Pink Sheet)*, available: www.worldbank.org, downloaded 7 September 2007; Organisation for Economic Co-operation and Development, *Main Economic Indicators*, available: www.oecd.org, downloaded 31 August 2007; World Bank, *Prospects for the Global Economy—Forecast Summary*, available: www.worldbank.org, downloaded 31 August 2007; staff estimates.

1.2.11 Growth in global semiconductor billings



Source: Semiconductor Industry Association, available: www.sia-online.org, downloaded 31 August 2007.

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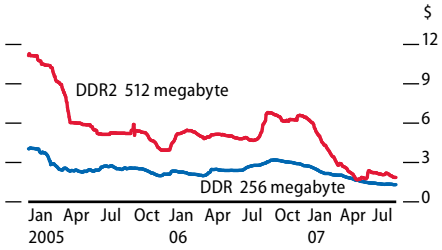
little change: the Organization of the Petroleum Exporting Countries (OPEC) has cut output to meet its lower quotas, set in February this year, while growth from non-OPEC countries has been sluggish due to delays in production from new projects. Tighter market conditions have been further aggravated by supply disruptions in Iraq and Nigeria, and persistent geopolitical uncertainties on oil supply. The Brent crude oil price is projected to stay elevated at over $70 per barrel for the remainder of 2007 and 2008, on the basis of current futures prices (Figure 1.2.13).

Prices of non-oil commodities advanced further (Figure 1.2.14). Metals and minerals prices continued to register double-digit growth rates, rising by 21.3% in the first 8 months of the year. Strong demand from industry and supply disruptions (in some cases) contributed to significant gains in nickel, tin, and lead. Nickel prices soared, rising by 103.9% to end-August, mainly attributed to swelling demand for stainless steel (particularly in the PRC), since about two thirds of global nickel output is used in its manufacture.

Agricultural food prices also surged, led by fats, oilseeds, and grains. Heavy demand from the PRC and India, combined with weather-related supply shortfalls, sent wheat, soybeans and oil, palm oil, and coconut oil prices higher from early this year. Rising (crude) oil prices also reignited demand for biofuels, lifting prices of soybeans and maize. This has resulted in rising costs of feeds, trickling down to higher costs of beef, pork, and poultry, as well as of cooking oil. Higher prices of soybeans and maize have also encouraged farmers to switch to planting them instead of grains, thus pushing grain prices higher.

These developments in non-oil commodity markets call for a reassessment of *ADO 2007*'s price projections. Non-oil commodity prices are now seen increasing by 12.4% in 2007. But the prospect of moderating demand from the PRC, together with improving supply conditions, is starting to ease price pressures. Having, it seems, peaked this year, non-oil commodity prices are expected to stabilize gradually over the course of 2008.

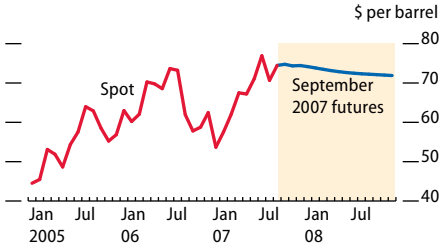
1.2.12 Selected DRAM prices



DRAM = dynamic random access memory; DDR = double data rate.

Source: Bloomberg, downloaded 5 September 2007.

1.2.13 Brent spot and forward prices



Sources: Energy Information Administration, available: www.eia.gov; FutureSource.com, available: www.futuresource.com; both downloaded 10 September 2007.

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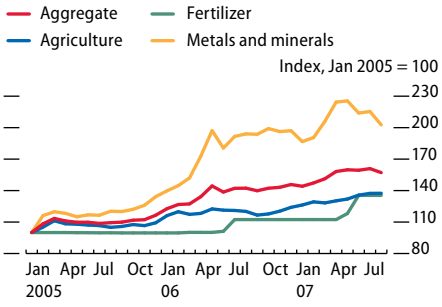
Capital flows and financial markets

Developing Asia's financial markets tumbled in August amid concerns over US subprime mortgages and spreading global credit fears. With the notable exception of the PRC, in Asia most equities skidded, credit risk spreads widened, and currencies faltered. Despite this apparently high vulnerability of the region's financial markets to global turbulence, strong growth and generally sound macroeconomic fundamentals are helping the region restore calm to financial markets with relative ease. Asian shares are already bouncing back, limiting the losses from the market sell-off.

The environment for external funding remains broadly positive. On the back of a robust growth outlook, developing Asian markets have attracted heavy private capital inflows. In 2006, net private flows reached an all-time high of $254.5 billion (Figure 1.2.15). Although the pace of equity investment flows has eased (mainly due to a slowdown in offshore issuance of initial public offerings by PRC corporations in response to government efforts to stem investment), net private debt inflows have

1.2.14 Non-oil commodity prices



Source: World Bank *Commodity Price Data (Pink Sheet)*, various issues, available: www.worldbank.org, downloaded 7 September 2007.

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been climbing. While the repricing of credit risks triggered by the recent financial ferment is likely to slow credit inflows to the region, this may in fact help in mitigating the risk of overheating in some of developing Asia's asset markets.

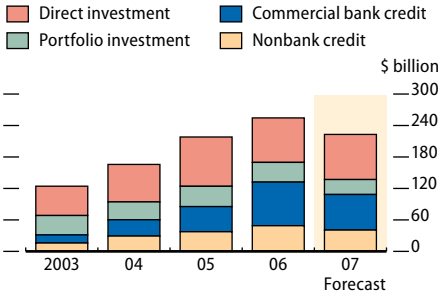
Sovereign credit spreads have widened in the wake of the US subprime turmoil (Figure 1.2.16). Heightened financial volatility and a sharp reversal in risk appetite—together with elevated funding costs—are expected to narrow external funding opportunities for Asian borrowers. But with ample current account surpluses and large foreign reserve holdings, they have less need of external funding. Despite continued low funding costs, the region's strong fiscal position has slowed new issuance of sovereign debt over the past few years.

In fact, many of the larger developing economies in the region have started to invest abroad. The PRC Government has relaxed regulations and granted incentives to targeted industries, encouraging a surge in outward direct investment. India's outward direct investment has also climbed rapidly, to $9.7 billion in 2006 from only $1.8 billion in 2005, as firms have established production, manufacturing, and distribution operations elsewhere.

Robust export growth, along with continued capital inflows, has lifted foreign reserve holdings held by developing Asia's central banks. In the first half of 2007, their reserve accumulation amounted to $360.1 billion, or almost 40% of the worldwide total (see also Box 1.1.2.). Led by the People's Bank of China, all major Asian central banks have reserve holdings that can cover their country's short-term external obligations, even under the most stringent standards for reserve adequacy.

Although the risk of repercussions from the subprime and credit turbulence seriously affecting growth cannot be ruled out, developing Asia's reduced external funding requirements and improved economic fundamentals are expected to buffer impacts. Price adjustments in these markets have been in line with ongoing corrections globally, and have broadly tracked those in both mature and other emerging markets. This resilience reflects robust growth, low inflation, and sound fiscal and external positions.

1.2.15 Net private flows to Asia-Pacific

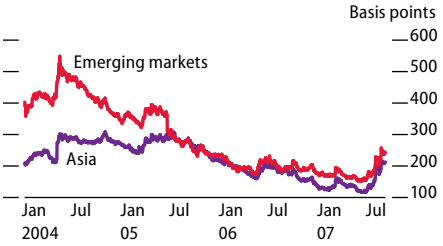


Note: Asia-Pacific consists of People's Rep. of China; Hong Kong, China; India; Indonesia; Rep. of Korea; Malaysia; Pakistan; Philippines; Taipei,China; and Thailand.

Source: The Institute of International Finance, Inc., *Capital Flows to Emerging Market Economies*, various issues, available: www.iif.com, downloaded 31 August 2007.

Click here for figure data

1.2.16 Sovereign credit spreads, emerging markets including Asia



Source: Bloomberg, downloaded 3 September 2007.

Subregional summaries

Central Asia

Subregional performance

The *Update* revises up GDP growth projections made in March's *Asian Development Outlook 2007* (*ADO 2007*) for six of the seven countries in Central Asia (not Tajikistan). This lifts the subregional projection to 11.1% from 10.3%. In the first half of 2007, these countries showed evidence of quickening economic activity.

In Azerbaijan, the pickup was driven by the contribution of net exports on the back of an increase in oil production of almost 65% (year on year) in the first half. Kazakhstan's growth is being pushed higher by strong growth in domestic demand, despite a negative contribution of net exports of goods and nonfactor services. Growth in Turkmenistan has been raised on account of strong gas exports. Uzbekistan also continues to benefit from a favorable external environment, with net exports the main contributor to growth.

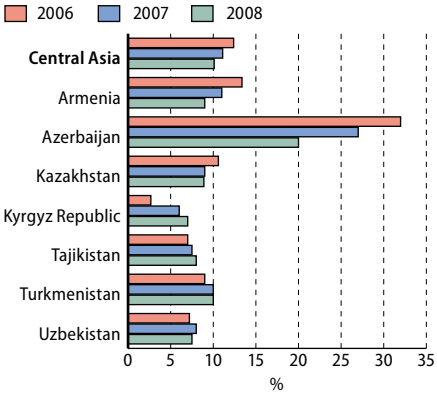
Domestic demand is the main driver of growth for Armenia and the Kyrgyz Republic—the other two countries with raised forecasts—and for Tajikistan. In all three, disposable incomes continue to be boosted by remittance inflows. Armenia and the Kyrgyz Republic are seeing a greater pickup than expected in private investment activity related to FDI inflows. Tajikistan's outlook remains unchanged though, and energy shortages continue to hurt the mainstay of industry, aluminum. The authorities have ramped up public investment spending, but are relying on external sources. The sector pattern of growth across Central Asia shows that construction- and services-driven activity is continuing to accelerate.

Inflation in five countries is on the rise due to rapid monetary expansion resulting from strong foreign exchange inflows and much expanded public spending. The *Update* revises upward the average inflation rate projection for 2007 to 9.7% from 8.6%.

In Azerbaijan, 12-month consumer price index inflation rose to 15.2% in July 2007, driven by a loose fiscal policy, unsterilized interventions in the foreign exchange market, and upward adjustments in administered prices. In Kazakhstan, larger bank borrowing than last year has lifted domestic demand and inflation. Upward adjustments in administered prices were the main factor in raising inflation in Tajikistan. Uzbekistan's officially reported inflation rate for the first half of 2007 was 2.2%, but the findings of a recent International Monetary Fund review mission suggest that although inflation has eased somewhat, 10% is a reasonable estimate. A widening current account surplus (and overall surplus) there continues to exert upward pressure on monetary aggregates.

The subregion's economies (with the exception of Tajikistan) are generally coping with real exchange rate appreciation induced by

1.3.1 GDP growth, Central Asia



Sources: Asian Development Outlook database; staff estimates.

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strong net foreign exchange inflows. In an environment where most of these inflows are expected to be sustained over the medium term, real appreciation pressures are likely to persist. Since influencing the real exchange rate is impossible beyond the short term, central banks should accord primacy to ensuring low inflation, and not resist an orderly appreciation in nominal exchange rates.

The *Update* revises marginally upward the subregion's projected current account surplus for 2007 to 3.5% from 3.2%. Export growth in the main hydrocarbon-exporting countries (Azerbaijan, Kazakhstan, and Turkmenistan) was strong in the first half of 2007. Uzbekistan, too, is realizing large surpluses in both its trade and current accounts. Export growth is picking up across the subregion but is accompanied by accelerating import demand, yielding widening trade deficits.

Subregional prospects

The external environment is expected to be quite favorable in 2008, yet the pace of domestic reforms to energize the private sector will also be an important determinant. While world energy prices are expected to stabilize, they will remain at relatively high levels, supported by global demand. Accordingly, GDP growth forecasts for most hydrocarbon exporters have been revised upward. Nonenergy commodity prices, in particular base metals, are expected to soften only slightly in 2008 while gold prices are expected to remain high. With larger production capacities being installed, exporters of base metals (Armenia and Tajikistan) and gold exporters (Kyrgyz Republic and Uzbekistan), should see improved export performance.

For the subregion as a whole, the *Update* revises upward the GDP growth forecast for 2008 to 10.1% from 9.4%. But surging foreign exchange inflows with potential inflationary consequences will remain a problem, and the inflation forecast for 2008 is revised up to 9.1% from 7.9%. The average current account surplus as a share of GDP has been adjusted upward from 3.3% to 3.6%, mainly due to higher hydrocarbon exports in several countries; capital inflows will also support a high overall balance.

Country highlights

Armenia

Projected GDP growth for 2007 has been uprated to 11.0% given the better than expected growth for the first half of 2007 of 11.2%, which largely reflected continued expansion in construction and services. Inflation edged up to 4.5% (year on year) in June 2007, strongly suggesting that the central bank will tighten monetary policy further to achieve its end-of-year inflation target of 4.0%. Fiscal policy remains prudent, with an improving ratio of tax revenue to GDP and moderately higher capital expenditure financed from official external assistance.

Exports are recovering from a slump in 2006 but import demand is even stronger, widening the trade gap. Still, the projected current account deficit for 2007 has now been slightly reduced from *ADO 2007*, reflecting larger inward remittances; FDI inflows are likely to cover this deficit.

Azerbaijan

Azerbaijan's GDP growth for this year has also been revised upward,

from 25% in *ADO 2007* to 27%, as is the forecast for 2008, from 17% to 20%. The economy grew at a torrid 36.2% year on year during the first 5 months of 2007, powered by large increases in oil production and exports (as new projects move toward full production), which spurred growth in construction and services.

Full-year inflation, too, is adjusted upward, from 14% to 18%. Excessive expansion in public spending and the money supply has fanned inflation pressures and, as expected, pushed inflation into double digits in January–June 2007. The central bank has tried to tighten monetary policy and is allowing the manat to appreciate gradually, but this by itself is unlikely to rein in inflation.

Of concern is the projected non-oil fiscal deficit as a share of non-oil GDP since the authorities persist with steep increases in current and capital expenditures (Box 1.3.1). With import growth slowing (as import-dependent hydrocarbon projects near completion), the trade and current accounts are posting large surpluses. FDI inflows, which had boosted investment rates in the last few years, are on the wane. Domestic investment has recently registered an uptick, but a sustained improvement will depend on a significant amelioration in the business climate and in governance reforms.

Kazakhstan

The GDP growth projection for 2007 has been raised from 8.6% to 9.0%; the forecast for 2008 is kept at 8.9%. The pickup in growth in the first half of 2007 stemmed from higher oil production and continued strong domestic demand, driven by private consumption and investment spending. Projected inflation in 2007 is adjusted upward to 8.5% from 8.0% in *ADO 2007*. Consumer price inflation eased slightly (8.1% year on year in June 2007) but inflationary pressures stemming from excessive foreign borrowing by commercial banks for onlending remain a major concern. The central bank has tightened monetary policy, raising the discount rate and reserve requirements for foreign currency borrowing.

Central government spending is expected to be higher than in the original budget, but so too is revenue. The planned increase in the non-oil fiscal deficit as a share of non-oil GDP is moderate and within a "prudent band." Export growth has been buoyant and the trade balance is in surplus, but significant deficits in its services and income balance are widening the current account deficit (fully covered by FDI inflows).

Structurally, the Government has taken several initiatives for improving the competitiveness and productivity of the non-oil sector, but the financial sector remains vulnerable to currency and interest rate risks.

Kyrgyz Republic

Growth for this year is now put at 6.0%, from 4.0% earlier, and the forecast for next year is upgraded from 5.0% to 7.0%. The economy grew strongly in the first half of 2007, by 9.2% relative to the same period last year, with good performance from construction and services and a recovery in industry. Consumer price inflation in January–June 2007 was moderate at 4.8%.

Export growth has strengthened, but imports—mainly energy, consumer durables, and capital goods—have outpaced it. In the financial

1.3.1 Resource windfalls—Oil revenue management in Azerbaijan and Kazakhstan

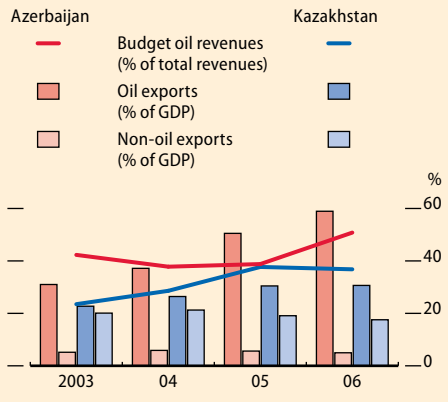
Soaring global commodity prices have produced large windfall revenues for resource-rich economies. Although these revenues have improved external balances, reduced fiscal strain, and accelerated growth, they have also complicated the macroeconomic management of these economies. A major concern in the short run is monetary control. With rigid exchange rate policies limiting nominal appreciation, soaring foreign exchange inflows fuel inflationary pressures. The consequent real appreciation harms the competitiveness of non-oil sectors—a phenomenon known as "Dutch disease"—and thus hampers diversification of the economy. This box explores how two resource-rich economies, namely Azerbaijan and Kazakhstan, have managed their surging oil revenues over the past 4 years.

Following a recovery in 1999, oil prices increased by more than 50% in 2000 to $28 per barrel and stabilized in 2001–2003 at that level. Oil prices have accelerated since 2004, averaging $64 per barrel in 2006. The two countries set up oil funds—the State Oil Fund of Azerbaijan Republic (SOFAR) in 1999 and the National Fund of the Republic of Kazakhstan (NFRK) in 2001. The funds were established with two main aims: to save part of oil revenues for future generations, and to prevent macroeconomic instability arising from the volatility of oil income. The authorities were concerned about political pressure to spend the oil wealth rapidly and inefficiently.

Assets of these funds have been invested in both domestic liquidity assets (deposits and money market instruments) as well as foreign fixed-income and equity instruments, to insulate the domestic economy from potential excess liquidity from oil revenues. The main issue of interest is whether the two funds have achieved their dual objectives.

Due to recent oil price gains, the share of oil in the two countries' exports has increased sharply. Azerbaijan's exports increased to more than 60% of GDP in 2006, up from 36% in 2003, with oil making up more than 90% of total exports (Box figure 1). While Kazakhstan's oil dependency is less pronounced, oil exports still accounted for about 60% of total exports. The increase in oil export revenues between 2003 and 2006 represented 49% of Azerbaijan's and 24% of Kazakhstan's 2006 GDP (Box figure 2). Kazakhstan saved more than 60% of its increased oil export receipts in its oil fund, while Azerbaijan saved 12%.

1 Oil exports and oil budget revenues



Source: Staff estimates.

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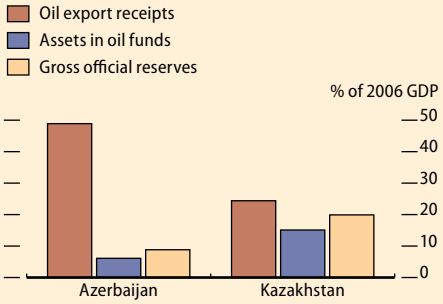
The two countries also differ in terms of the fiscal arrangements for their oil revenues. Azerbaijan's budget revenues in 2006 soared by 67% relative to the previous year, and half these receipts came from the oil sector (Box figure 1). In Kazakhstan, where fiscal revenues increased by more than 30% in 2006, oil income accounted for 37% of budget revenues.

2 Increase in oil-related indicators 1, 2003–2006



Source: Staff estimates.

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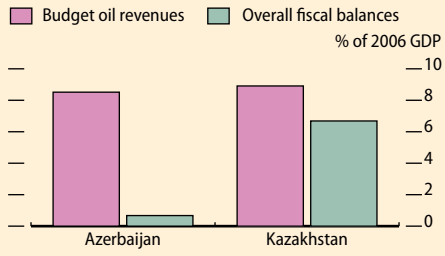
With ample fiscal resources, Azerbaijan accelerated public spending. It loosened fiscal policy noticeably in 2006, and capital spending more than tripled compared with the previous year. Kazakhstan has consistently kept spending below revenue and ran budget surpluses. Its overall surplus rose to 7.5% of GDP in 2006. On average, Azerbaijan used 8% of the increase in oil revenues accruing to the budget to improve its fiscal balance (measured as the ratio of the increase in the fiscal balance to the increase in fiscal oil revenues between 2003 and 2006), while Kazakhstan used 75% for that purpose (Box figure 3).

3 Increase in oil-related indicators 2, 2003–2006



Source: Staff estimates.

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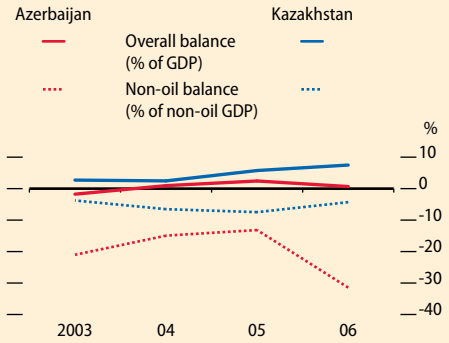
For oil-exporting countries, the ratio of non-oil fiscal deficit to non-oil GDP is a good measure of the true fiscal stance. The Azerbaijan Government's ambitious spending program is reflected in a widening non-oil fiscal deficit in 2006. The non-oil deficit of more than 30% of non-oil GDP exceeds most widely accepted thresholds

1.3.1 Resource windfalls—Oil revenue management in Azerbaijan and Kazakhstan *(continued)*

for medium-term fiscal sustainability (Box figure 4). In contrast, Kazakhstan's non-oil fiscal deficit in 2006 dropped to 4.3% of non-oil GDP, with substantial budget surpluses accumulated in NFRK.

4 Fiscal balances



Source: Staff estimates.

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The two oil funds are differently designed (box table). On paper, Azerbaijan's SOFAR assigns primacy to savings objectives, in the sense that the total amount of outflows cannot exceed inflows in any given year. Yet in practice, a portion of SOFAR funding has been allocated to the state budget to finance public investments. In addition, SOFAR's expenditure policy permits the funding of investment projects outside the state budget, bypassing the public investment program. SOFAR has financed programs assisting internally displaced people, projects for water and irrigation, and has made investments in the Baku-Tbilisi-Ceyhan oil pipeline. These activities have limited SOFAR's saving. Formally, SOFAR attaches low weight to stabilization objectives.

In contrast, Kazakhstan's oil fund emphasizes stabilization but, at the same time, calls for automatic accumulation of oil revenues beyond a predetermined oil price. Although NFRK is allowed to transfer funds to the budget, subject to the president's approval, this rule has never been invoked in the current oil boom. In practice therefore, NFRK has accumulated savings at a brisk rate.

Azerbaijan and Kazakhstan have made significant progress toward transparent management of oil revenues. For example, both countries have already joined the Extractive Industries Transparency Initiative. However, there is still much room for improving oil revenue management, in terms of governance, transparency, integration with the overall fiscal framework, and asset management. Setting up an oil fund by itself does not guarantee either fiscal discipline or commitment to future savings. Only when oil revenues are managed as an integral part of a sound overall fiscal framework, can an oil fund attain its objectives.

The governments in resource-rich Asian countries need to find the right balance between fulfilling development needs (by spending oil revenues), maintaining macroeconomic stability (by stabilizing the impact of oil revenues), and saving part of oil wealth for future generations (by saving oil revenues). Policy makers need to pay close attention to the effects of higher public spending on the real exchange rate and on macroeconomic stability, and should make the best strategic use of windfall revenues for achieving long-term development goals.

Oil funds: Objectives and rules

Fund and date established	Stated objectives	Inflow rules	Outflow rules	Management institutions	Investment abroad	Balance (end-2006)
Azerbaijan State Oil Fund of Azerbaijan Republic (SOFAR), 1999	Greater weight on saving than stabilization	The Government's share in production-sharing agreements with foreign oil companies for post-Soviet oil fields	Withdrawals not to exceed inflows in a given year. Transfers allowed to the budget for public investments. Own investments allowed in projects for refugees, oil pipelines, and water/irrigation.	SOFAR and international asset management companies	60% in liquid assets (cash, money market instruments) 40% in sovereign debt securities	$1.9 billion (17.5% of GDP) *Memo item:* Gross official reserves: $2.5 billion
Kazakhstan National Fund of the Republic of Kazakhstan (NFRK), 2001	Little more emphasis on stabilization than saving	*Stabilization:* Oil revenue above the baseline price. Ad hoc privatization and bonus receipts *Saving:* 10% of baseline budget oil revenues from identified oil companies	Transfers to state and local budgets allowed with president's approval	Central bank and international asset management companies	Stabilization portfolio (25%) in liquid assets Savings portfolio (75%) in sovereign debt securities and shares	$14.1 billion (9.5% of GDP) *Memo item:* Gross official reserves: $19.1 billion

Sources: Economist Intelligence Unit, Azerbaijan and Kazakhstan country reports, various issues; International Monetary Fund reports.

and capital accounts, FDI inflows, particularly from Kazakhstan, have picked up, helping build foreign exchange reserves. Structural reforms have made some progress, particularly in the areas of business regulation, and privatization of energy and banking.

Tajikistan

At 7.3%, economic growth was strong in the first half of 2007, buoyed by higher investment spending and remittance-fueled consumption. Full-year growth is kept unchanged at 7.5%. Energy shortages affected aluminum production. With the pass-through of higher natural gas export prices charged by Uzbekistan and with upward adjustment in electricity tariffs, inflationary pressures are likely to persist for the rest of the year. The *Update* therefore revises upward projected inflation for 2007 from 7.0% to 11.4% (the 12-month rate at end-June 2007 was 9%).

Following debt relief under the Multilateral Debt Relief Initiative, the external debt strategy has taken another turn with the authorities' plan to contract significant amounts of concessional loans to finance infrastructure.

Turkmenistan

Stronger than expected gas exports propelled growth in the first half of 2007, such that GDP growth for 2007 and 2008 is revised upward to 10.0%. At the start of the year, the new Government launched some reforms in education, public health, and social protection, but is keeping the management of hydrocarbon revenues nontransparent and off the budget.

Uzbekistan

The *Update* upgrades projected GDP growth for 2007 from 7.4% to 8.0% and for 2008 from 7.1% to 7.5%. High investment spending and net exports drove first-half 2007 growth of 9.7%. Inflation is expected to be pushed still higher: for 2007 from 9.0% to 10.0% as a sharp increase in net foreign assets has fed monetary expansion. Price pressures are likely to build following large wage and pension hikes of August 2007.

Following negotiations for higher prices in export contracts as well as greater investment, natural gas exports are becoming more important in the export commodity structure. A portion of these receipts is being channeled into the Uzbekistan Fund for Reconstruction and Development.

East Asia

Subregional performance

Growth rates projected for 2007 in all five economies in this subregion have been revised up from those made in *ADO 2007*. Aggregate growth is now put at 8.9%, upgraded from 8.0% in March and close to the vigorous expansion rate of 2006. These figures are dominated by the PRC, where the economy quickened in the first half and the full-year forecast is revised up to 11.2%, the fastest rate in 13 years.

Solid demand for East Asia's manufactured exports helped underpin

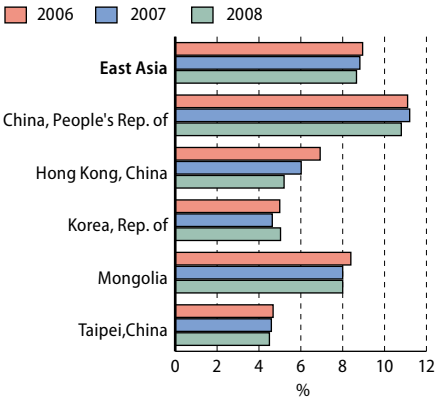
economic growth in the first half of 2007. The PRC's exports climbed by nearly 28% in nominal terms from the year-earlier period, about equal to the rapid export growth in 2006, and its imports rose by about 18%. Indeed, strong growth in the PRC's imports has been one reason for robust export gains by other East Asian economies. For example, total exports from the Republic of Korea, the second-biggest economy in the subregion, rose by about 14% in the first half, and exports from Taipei,China increased by nearly 8%. (In both cases export growth moderated from the 2006 pace, partly because of softer global demand for some electronic products.)

Domestic demand generally has strengthened and is adding to growth in the subregion. Both consumption and investment grew rapidly in the PRC in the first half of 2007. Stronger labor markets helped support consumption growth in Hong Kong, China; Korea; and Taipei,China, despite rises in policy interest rates in the latter two economies. In Taipei,China, private consumption is recovering from a weak period in 2006 when credit-card issuers tightened lending after a rise in defaults. Investment in these three economies also picked up in the first half.

Most inflation forecasts for the subregion are revised up, particularly for the PRC, where food prices have increased sharply, in part because of a pig disease that has reduced pork supplies. In the PRC, inflation is now forecast at 4.2% for 2007 (1.8% in *ADO 2007*). Revisions to inflation expectations in several other economies also are influenced by rising food prices. Subregional inflation this year is now put at 3.5%, up from 1.9%. Still, inflation remains low (in a range of 1.6–2.5%) for Hong Kong, China; Korea; and Taipei,China.

The *Update* lifts the PRC's projected current account surplus for 2007 to 10.9% from 8.8% in *ADO 2007*, mainly on the basis of a higher than expected trade surplus. Korea's forecast current account surplus is raised to 0.6% from 0.1% in March, reflecting stronger than anticipated exports. External surpluses are projected for Hong Kong, China; Mongolia; and Taipei,China, at the same levels as forecast in March.

1.3.2 GDP growth, East Asia



Sources: Asian Development Outlook database; staff estimates.

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Subregional prospects

The subregional GDP growth forecast for 2008 is uprated to 8.7% from 8.0% in March. For the PRC, the revision is a full 1 percentage point to 10.8%, given the heightened growth momentum of this year. Mongolia's forecast, too, is revised up 1 percentage point, to 8.0%, mainly on expansion of its mining industry and higher government spending. More moderate upward revisions are made for the Hong Kong, China forecast (to 5.4%) and Korea (to 5.0%). The outlook for Taipei,China (growth of 4.5%) is unchanged from March.

Inflation next year is put at 3.3% on a subregional basis, revised up from 2.2% in March. In the PRC, even with slower food price rises, inflation has been revised up to 3.8%. The inflation forecasts for 2008 are also raised for both Hong Kong, China and Mongolia.

All five subregional economies are likely to maintain current account surpluses in 2008. The outlook for the aggregate surplus is raised to 7.9% from 6.9%, due to an upward revision to the forecast for the PRC's current account surplus to 10.5% from 8.9%.

Country highlights

People's Republic of China

Despite efforts by the authorities to damp investment and exports, GDP growth of 11.5% in the first half of 2007 came in at the fastest rate since 1994. Industry again led the way, expanding by 13.6%, with services up by 10.6% and agriculture by 4.0%. Drivers of investment included strong profitability, buoyant sales, and still-low lending rates. Both fixed asset investment and consumption were strong.

On the external side, merchandise exports grew vigorously, pointing to a projected trade surplus of $300 billion this year. Based on the updated assessment of domestic and external demand, the GDP growth forecast is revised to 11.2%, from 10.0% in *ADO 2007*. The current account surplus is now expected to swell to 10.9% of GDP, revised up from 8.8%. Inflation has turned sharply higher (to 6.5% in August), mainly caused by food price increases, prompting a revision in the 2007 forecast to 4.2% from 1.8% in *ADO 2007*. Housing price increases have quickened in many cities, too.

Continued high trade surpluses and capital inflows took foreign exchange reserves to $1.3 trillion in June and have complicated monetary policy. The central bank has continued to take excess liquidity out of the banking system, but has not completely offset capital inflows. The authorities have allowed the yuan's appreciation against the US dollar to accelerate slightly.

Among recent efforts to curtail liquidity and to tame investment, the Government has raised interest rates, hiked commercial banks' reserve-requirement ratio, and cut some export-supportive measures. But the effectiveness of interest rate rises in cooling demand is hindered by seepages of rising foreign exchange reserves into liquidity and by the fact that the economy is still not fully market-based. Incentives for construction, particularly at the local level, also frustrate efforts to limit investment growth.

This year's momentum is likely to carry into 2008, implying further steps to cool the rapid investment expansion. But top priorities remain the creation of jobs and on lifting income growth in lagging regions, underpinning growth in consumption. Investment will also stay high. The gap between export and import growth will probably close a little as the changes regarding exports take effect. GDP growth for 2008 is revised to 10.8%, up 1 percentage point from the *ADO 2007* forecast. The current account forecast is raised to a surplus of 10.5% of GDP.

The sharp increases in food prices seen in 2007 are assumed to ease next year. This would open the way to carry out planned reforms in the pricing of state-controlled sectors such as water, power, and natural gas, foreshadowing tariff increases. On this basis, the inflation forecast for 2008 is raised from 2.2% to 3.8%, but it may surpass this revised forecast.

The booming stock market presents a risk. A sudden sharp fall could leave banks with rising nonperforming loan ratios, which would likely see them tightening lending, with impacts on the broader economy.

The authorities need to make further progress in rebalancing the economy, i.e., by reducing reliance on exports and investment in favor of private consumption. This could lessen vulnerability to external shocks and ease environmental strains. Policy measures have yet to have much

impact; growth in the trade surplus and investment outpaced retail sales growth in the first half of 2007.

Republic of Korea

Growth in this economy picked up from 4.0% in both the fourth quarter of 2006 and the first quarter of 2007, to 5.0% in the second quarter of this year, lifted by strong exports, improving growth in investment, and a gradual increase in consumer spending. This upward trend is likely to continue through the second half of 2007 and into 2008. The stronger than expected export performance augurs well for further gains in industrial activity and business investment. A steadily strengthening labor market (the seasonally adjusted unemployment rate was 3.2% in August, down from 3.5% a year earlier) is helping support the recovery in consumption. Both business and consumer confidence is rising. Consequently, GDP growth forecasts are revised up slightly, to 4.6% for this year from the *ADO 2007* level of 4.5%, and to 5.0% for 2008 from the previous forecast of 4.8%.

The Bank of Korea raised its overnight call-rate target in both July and August (to 5.0%) to preempt inflation pressures and to prevent a bubble from forming in the property market. Inflation is projected at 2.5% this year (2.4% in *ADO 2007*) and 2.6% in 2008 (unchanged from the March forecast), at the bottom of the central bank's 2.5–3.5% target range. The won/dollar exchange rate has continued to appreciate moderately, helping curb inflation pressures generated by robust domestic demand. Reflecting stronger than expected exports, the current account surplus for 2007 is now projected at 0.6% of GDP (0.1% in *ADO 2007*); the forecast for the 2008 current account surplus is maintained at 0.1%.

Taipei,China

Economic growth was 4.6% in the first half of 2007, slightly stronger than expected. In the second quarter, growth picked up to 5.1%, driven by a 12.5% jump in private fixed investment, particularly by semiconductor companies. Investment is expected to expand further in the second half, but not at the brisk pace seen in the April–June period. Private consumption edged higher during the first half, recovering from weak levels in 2006 after a tightening in consumer credit that followed a bursting of a credit-card bubble. Consumption is expected to strengthen further in the second half, supported by rises in incomes and employment and by firm asset markets.

As a result of the pickup in investment and consumption, domestic demand contributed 40.0% of the GDP expansion in the first 6 months compared with just 7.0% in the year-earlier period. The GDP growth forecast is nudged up to 4.6% for 2007, from 4.3% in March, and the 2008 projection is maintained at 4.5%.

The monetary authorities raised the benchmark discount rate further in the first half, in part because of concern about rises in wholesale inflation even as consumer inflation stays low. For 2007, the consumer price index is projected to rise by an average of 1.6% (accelerating from just 0.6% in 2006), and by 1.5% in 2008, unchanged from *ADO 2007* predictions. The outlook for the current account outcome is still for surpluses of 6–7% of GDP this year and next.

Hong Kong, China

This economy, heavily influenced by trends in the PRC, expanded by a faster than expected 6.3% in the first half of 2007. Growth was broad-based, with external trade gathering strength and domestic demand accelerating. Exports of goods and services rose by about 11.0% in real terms in the second quarter of the year. Services benefited both from buoyant financial market activity, much of it related to capital raising by PRC companies, and from the strength of trade and tourism.

Private consumption spending picked up, supported by rising incomes and a strong labor market (the seasonally adjusted unemployment rate fell to 4.1% in July, a 9-year low). Construction also recovered somewhat, after an extended period of contraction, and investment in equipment was strong. The GDP growth forecast for 2007 is raised to 6.0% from 5.4% in *ADO 2007*, and for 2008 to 5.4% from 5.2%.

Budget initiatives that exerted downward pressure on some prices helped keep inflation to 1.5% in the first 6 months. Prices of food imported from the PRC have been rising, and therefore inflation in the second half will be higher than in the first. For all 2007, the inflation projection is raised marginally to 1.7% from 1.6%, and for next year to 2.5% from 2.3%. The forecast is maintained for a current account surplus of nearly 10.0% this year, rising slightly in 2008.

Mongolia

The least developed economy in the subregion, Mongolia is benefiting from strong global demand for its minerals (mainly copper and gold), good weather last year that is helping agricultural production, and growth in construction, transportation, and telecommunications. Government spending has increased on infrastructure and on social assistance programs, buttressed by rising public revenues from the minerals industry. GDP growth forecasts for both 2007 and 2008 are revised up by 1 percentage point, to 8.0%.

Inflation has been higher than expected owing to rising prices for imports of food from the PRC and petroleum products from the Russian Federation, which increased its petroleum export tariff. Price pressures have also been fueled by high rates of expansion in public spending and in broad money supply. The inflation forecasts are raised to 7.5% from 6.0% in *ADO 2007* for both this year and next. Mongolia is still projected to have current account surpluses equivalent to about 2.0% of GDP in both years.

South Asia

Subregional performance

Economic growth in South Asia, which expanded sharply by about 8.7% in 2005 and 2006, is now projected to moderate slightly to 8.1% in 2007. (*ADO 2007* had forecast a slightly more abrupt deceleration to 7.7%.) This revision reflects primarily a larger than projected expansion in India, which accounts for 80% of South Asia's GDP, of 8.5% instead of 8.0%. Little or no change was made in forecasts for the other large economies—Pakistan and Bangladesh. Sri Lanka also stays unchanged,

with 6.1% growth in 2007, because agricultural growth cannot repeat its strong post-tsunami recovery, and because tourism and related services are suffering from many governments' travel warnings. Nepal has yet to enjoy a "peace dividend" from favorable political developments in 2006; growth is estimated at 2.5% in 2007, slightly lower than had been expected in *ADO 2007*.

The services sector has been the main driver of growth in South Asia. Its shares of GDP in Bangladesh, India, Pakistan, and Sri Lanka were 49%, 55%, 53%, and 56% respectively in 2006, which is significantly larger than in other countries relative to their respective levels of per capita income and land area. Services in the subregion has been performing well recently, with sector output growing by 10.5% in 2006 led by trade, and transport and communications. The smaller industry sector also expanded rapidly, with sector growth up by 10.1% buoyed by manufacturing. South Asia's agriculture sector grew by 2.7% during the year.

Although inflation has been moderate, it is an issue in some countries—primarily Bangladesh, Pakistan, and Sri Lanka where projections for inflation in 2007 have been nudged up. Despite declining oil prices in the latter part of 2006, upward pressures prevail because weaknesses in subregional agricultural production and higher global prices are pushing up food inflation, while strong domestic demand has made it difficult to rein in nonfood price increases. Most central banks have tightened monetary policy and have managed to reduce demand pressures a little. In the *Update*, subregional inflation is projected at 5.7%, up slightly from the 5.5% forecast in *ADO 2007*.

South Asia's current account deficit is now projected at 1.9% of GDP in 2007, somewhat narrower than the 2.2% deficit foreseen in *ADO 2007*. The trade deficit is widening in most countries as strong domestic demand sucks in imports. However, heavy gains in workers' remittances often help compensate, as do larger services exports in India.

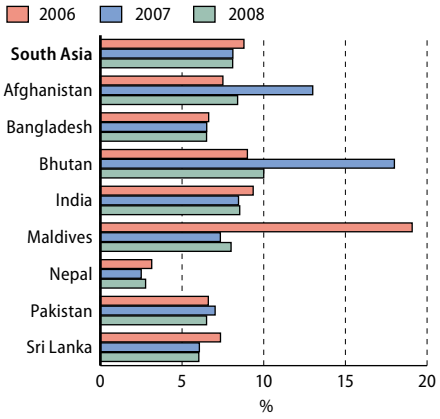
Such remittance inflows have increased substantially in recent years, reaching 14.2% of GDP in Nepal in 2007, 8.6% in Sri Lanka, and 7.7% in Bangladesh in 2006. They have generally boosted consumption rather than investment, and partly explain the consumption-dominated demand structure in South Asia. Capital inflows, especially foreign direct investment, have significantly increased in India and Pakistan because of their growth prospects. In all countries, current account deficits have being readily financed and international reserves have increased.

Subregional prospects

The South Asian subregion is expected to grow by 8.1% in 2008. This outlook is based on the assumptions of ongoing tight monetary policies, normal agricultural production, maintained fiscal discipline, and continued structural reforms. With robust demand for capital goods to solve production capacity bottlenecks and heavy spending to relieve infrastructure constraints, investment is expected to spark growth on the demand side. On the production side, industry is seen adding growth impetus to largely services-driven economies.

Inflation is set to moderate to 5.4% in 2008, assuming that agriculture

1.3.3 GDP growth, South Asia



Sources: Asian Development Outlook database; staff estimates.

Click here for figure data

has normal rainfall. There are, however, risks. Excess demand pressures may continue, despite efforts at tightening monetary policy. In Bangladesh, India, and Nepal, larger than expected reductions in fuel subsidies would further lift the prices of domestic petroleum products, and hence inflation, by more than forecast. Volatility in international oil prices is, of course, another risk.

South Asia's current account deficit is projected at 2.1%, essentially unchanged from *ADO 2007*. The forecast deficits for Pakistan and Sri Lanka have been widened, but that for India narrowed. Financing current account deficits has not been an issue, though the fallout from the turmoil in global credit markets may crimp some sources of capital inflows and raise the cost of debt financing.

Country highlights

Afghanistan

GDP growth in the licit economy decelerated to 7.5% in FY2006 (21 March 2006–20 March 2007), as drought affected agricultural production more than previously anticipated. Inflation, measured by the consumer price index for Kabul, subsided to 4.8% in March 2007, with declining rents mitigating the impact of higher food and energy prices. The fiscal deficit (including grants) improved to 2.7% of GDP as a result of stronger revenue collection, and execution of development expenditures improved significantly.

For FY2007, GDP growth is now projected to recover to 13%: agriculture is strongly rebounding, and construction and services continue their rapid expansion. Inflation is now put at 5.9%, on rising transportation costs and energy prices. The licit economy still largely depends on reconstruction work funded by foreign aid. Creating a sustainable economic base, phasing out the large illicit economy (opium production rose again substantially in FY2006, despite intensified counter-narcotics efforts), and reinvigorating security remain challenges.

Bangladesh

GDP growth was sustained at 6.5% in FY2007 (July 2006–June 2007). Expansion in industry and services compensated for moderate growth in agriculture. Industrial growth was driven by strong external demand for textiles and clothing, benefiting from the termination of quota arrangements at end-2004. Exports grew significantly in FY2007, due to robust performance in garments, but they were outpaced by even faster-growing imports, widening the trade deficit. Increased workers' remittances offset the trade deficit to maintain a current account surplus.

Despite flooding in August 2007, the growth momentum is expected to continue in FY2008, since conditions for the expansion of industry and services remain favorable. The external sector is also likely to maintain its strength with vigorous growth in exports and workers' remittances. The textile and clothing sector may, however, face tougher competition as the PRC's safeguard quota in the EU and US markets expires at end-2008.

Curbing inflation is an ongoing challenge, but the major risk to the economy lies in political disruption. The caretaker Government's success in maintaining stability and broad public support, until elections are held, is probably the single biggest risk factor for the economy.

Bhutan

This economy is experiencing structural changes both in economic and political dimensions. The phased commissioning of the 1,020 megawatt Tala hydropower project since July 2006 will eventually double electricity export capacity to India. Accordingly, GDP growth is expected to double to 18% in 2007, significantly boosting government revenue. Although Tala should reduce dependence on foreign aid, other economic issues remain. The most pressing is the need to promote private sector activity to create employment, especially for growing numbers of young entrants to the labor force. In the political sphere, Bhutan is scheduled to change from a monarchy to a two-party democratic system in 2008, though this is unlikely to have a major economic impact.

India

Robust growth momentum continues with GDP growth for FY2006 (April 2006–March 2007) estimated at 9.4%, the highest in 18 years. Manufacturing growth has caught up with that in services and has emerged as a driver of accelerated growth, led by increasing investment demand. GDP growth is expected to moderate to 8.5% in FY2007, as rising interest rates damp consumption expenditure, but investment will continue to expand, supported by a robust long-term outlook. Inflation, given by the wholesale price index, fell to 4.4% in July 2007, reflecting the influence of monetary measures on demand pressures.

Despite a widening trade deficit, expansion in the invisibles surplus is expected to limit the current account deficit to 1.6% of GDP in FY2007. Large net capital inflows have resulted in a marked appreciation of the rupee in the first quarter of FY2007, and monetary aggregates also rose steeply. Effective August, the central bank tightened monetary policy by raising banks' cash ratios and adopting tighter external borrowing limits for domestic companies.

Maldives

The economy rebounded sharply in 2006 from the post-tsunami contraction, with GDP growth of 19.1%. GDP is projected to rise by 7.3% in 2007, as the bounceback effect from large restoration activities and the return of tourists fades. While large reconstruction projects are included in the government budget, government consumption also rose due to policies to increase public sector wages and continue power and water subsidies in Malé. Although a delay in planned capital expenditure narrowed the fiscal deficit to 7.3% of GDP in 2006, the wide gap between expenditure and revenue cannot be sustained in the medium term. The 2007 budget will result in a very high fiscal deficit of 27% of GDP if it is implemented as planned.

Nepal

Nepal is yet to enjoy any "peace dividend" from political developments since April 2006 when parliamentary government was restored following a nationwide peaceful movement against the former regime. Revised estimates for GDP have the growth rate for FY2007 (17 July 2006–16 July 2007) decelerating to 2.5% from 2.8% in FY2006, because of renewed political unrest and adverse weather affecting the agriculture sector,

which still accounts for about two fifths of GDP. GDP growth in FY2008 is projected to improve only marginally to 2.8%.

Inflation moderated to 6.4% in FY2007 from 8.0% in the previous year. Although the impact of upward adjustments in petroleum prices and the increased value-added tax rate in FY2005 has subsided, food prices rose sharply as a result of low agricultural production. Imports continued to increase faster than exports in FY2007, but increased workers' remittances helped offset the larger trade deficit, and the current account surplus narrowed to 0.5% of GDP.

Pakistan

Underpinned by strong domestic demand, growth in GDP in FY2007 (July 2006–June 2007) was robust at 7%. It was supported by a recovery in agriculture and continued expansion in manufacturing and services. A slight deceleration to 6.5% is penciled in for FY2008. This is despite an expansionary government budget and policies to raise agricultural productivity and boost industrial investment. Inflation declined only a shade to 7.8% in FY2007. Monetary tightening measures controlled core inflation, but shortages in the supply of some food items, even with the overall strong recovery of agriculture, pushed up food prices.

Fiscal policy was expansionary in FY2007, with public expenditure 19.5% higher than the previous year, but a strong revenue performance kept the fiscal deficit to FY2006's level of 4.3% of GDP. The trade deficit widened: even though the growth in imports decelerated in FY2007, that of exports slowed even more, attributable to the poor performance in textiles and clothing in the wake of increased post-quota competition in global markets as well as a slowdown in several nontextile categories. Burgeoning workers' remittances limited the current account deficit to 5.2% of GDP. Pakistan is receiving large private capital inflows from abroad, including FDI, which have fully covered growing current account deficits and raised foreign exchange reserves.

Sri Lanka

GDP growth accelerated to 7.4% in 2006, despite the intensified conflict between the Government and the Liberation Tigers of Tamil Eelam (LTTE) since August 2006. The stock index lost about 10% in the first half of 2007, partly because business confidence has fallen since LTTE attacks and partly because the interest rates on treasury bills have risen sharply.

Consumer price inflation reached a peak of 18.6% year on year in March 2007 when the central bank was tightening monetary policy. The *Update* now projects inflation to average 14.5% in 2007, partly due to increases in fuel prices to limit subsidies. The fiscal deficit (including foreign-funded projects) is targeted at 9.1% in 2007. No changes are made to *ADO 2007*'s growth forecasts of around 6% in 2007 and 2008.

Southeast Asia

Subregional performance

Aggregate GDP growth in Southeast Asia is now forecast at a brisk 6.1% for 2007, revised up a half percentage point from *ADO 2007*. Four of the

major economies in the subregion—Indonesia, Malaysia, Philippines, and Singapore—are performing better than expected. Only Cambodia's growth projection has been lowered from March, and then by just a touch. If the outturn for the subregion comes in as forecast, this would be above the average of 5.6% over the past 5 years.

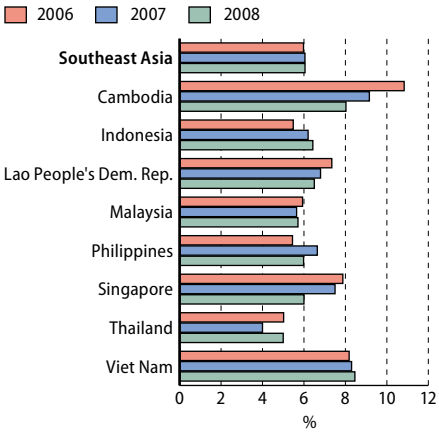
Stronger than expected domestic demand, especially in private consumption, accounts for most of the upward revision. In several economies, the levers of growth shifted from net exports in 2006 to domestic demand this year, but with Thailand an important exception. Exports have generally decelerated in line with lower US growth; softness in global demand for electronic products; and, for the oil-exporting economies of Indonesia, Malaysia, and Viet Nam, a softening in world prices and declines in domestic oil production. However, exports are cushioned by a rise in nonfuel commodity prices and trade with non-US markets, particularly the PRC and India. The extent of export deceleration has thus varied with the economies' relative diversification in terms of markets and products.

The expansion of private consumption this year reflects rising incomes in some countries, including incomes for producers of agricultural commodities; buoyant remittances (especially in the Philippines and Viet Nam); and lower interest rates. Public expenditures on development projects have supported investment growth in Indonesia, Malaysia, and Viet Nam. In the Philippines, public construction investment surged in the first half of the year (although such robust growth might not be sustained) and investment in durable equipment picked up for the first time in 2 years. Both private consumption and investment in Thailand have been damped by political and policy uncertainties.

Projections for the subregion's external current account surplus have been revised up to 7.0% of GDP in 2007 from 6.1% expected in *ADO 2007*. This reflects in part softer growth in imports in Thailand (commensurate with sluggish investment) and in the Philippines (mirroring the import intensity of weaker electronics- and garment-export industries). In Viet Nam, the current account is expected to record a significant deficit this year, as against a small surplus projected in *ADO 2007*. Although exports have benefited from Viet Nam joining WTO in January 2007, capital equipment imports have climbed rapidly on robust investment, and purchases of intermediate goods have stepped up as industrial production expands.

In most countries, current account surpluses and capital inflows exerted upward pressure on domestic currencies in the first half of 2007 but this might not continue through the second half because of uncertainties in international financial markets. Inflation pressures subsided more than expected, partly a result of currency appreciation and of better harvests in some countries. The effects of one-time factors that raised inflation in 2006 (administered fuel price increases in Indonesia and Malaysia and a hike in the value-added tax rate in the Philippines) also subsided. In Viet Nam, by contrast, inflation has increased more than expected, on both strong domestic demand and damage done to the food supply by drought, avian flu, and other livestock diseases. Overall, the subregional inflation forecast is downgraded to 3.8% from 4.2% in *ADO 2007*.

1.3.4 GDP growth, Southeast Asia



Sources: Asian Development Outlook database; staff estimates.

Click here for figure data

Subregional prospects

The forecast for 2008 subregional growth is uprated to 6.1% from 5.9% in *ADO 2007*. Three economies—Indonesia, Philippines, and Singapore—are projected to grow faster than in *ADO 2007*, based partly on their stronger than expected upward momentum this year. Aggregate growth at this rate would be the same as that expected for 2007. Accommodative monetary and fiscal policies in most countries are likely to support growth. With inflation pressures subsiding, there is scope to maintain low interest rates. Fiscal policies can also remain modestly stimulative, considering the general decline in public debt ratios.

Countries vary in their ability to pursue expansionary macroeconomic policies. Fiscal stimulus in the Philippines will depend on continued progress on tax collection. Viet Nam has less need for expansionary policies since growth is already high and policies are focused more on structural reforms to enhance competitiveness. In Thailand, despite substantial scope for expansionary policies, much of the impetus to growth is likely to come from a hoped-for reduction in political and policy uncertainty after the elections scheduled for end-2007.

Inflation is forecast to remain stable in the subregion in 2008 (at around 3.8%) on the expectation that world commodity prices will decline and domestic currencies will remain strong. With economic growth projected to edge higher in 2008 from this year in the three biggest economies—Indonesia, Malaysia, and Thailand—their current account surpluses are expected to decline somewhat. An upturn in the global electronics cycle would benefit those with a heavy weight in this area, i.e., Malaysia, Philippines, Singapore, and Thailand. This is likely to be offset to some degree by the expected decline in world nonfuel commodity prices. Subregionally, imports are projected to rise in line with stronger domestic demand and the exchange rate of domestic currencies, and in Viet Nam, continued reductions in tariffs.

Country highlights

Indonesia

GDP growth is on a gradual upward trend and is set to exceed 6% this year for the first time since the 1997–98 crisis. The 2007 forecast is revised up to 6.2% because private consumption and investment were stronger than expected in the first half. With the effects of the sharp October 2005 increase in fuel prices receding during 2006, and a consequent fall in inflation, the central bank has cut its policy interest rate significantly.

Domestic demand has taken over as the main driver of GDP growth. Private consumption is picking up on the back of lower interest rates and improved sentiment. A steady acceleration in bank lending and potential benefits from the new Investment Law have also contributed to stronger investment growth. The current account surplus is set to decline as domestic demand strengthens.

These trends are seen continuing in 2008, assuming steady progress in reforms to improve the investment climate. GDP is projected to increase by 6.4%. Inflation will likely remain around 6% on average. The current account surplus is expected to fall to just below 1% of GDP as world commodity prices moderate and domestic demand strengthens further.

Malaysia

The growth outlook has improved for 2007 following a stronger pickup in private consumption, supported by increases in incomes, better prices for agricultural commodities, and stable interest rates. Consequently, GDP is now projected to expand by 5.6% this year, revised up from 5.4%. Resilient domestic demand has offset some of the drag on GDP from weak electronics exports. Public investment has risen with the implementation of development projects under the Ninth Malaysia Plan. Inflation has fallen significantly as the impact of an 18–24% increase in retail fuel prices in March 2006 subsided. The current account surplus is likely to decline to 11.9% this year from a high 16.3% in 2006.

Next year's GDP growth forecast is maintained at 5.7%. The fiscal stimulus to public investment, a boost in civil service incomes, and benign monetary conditions should support domestic demand. Inflation in 2008 is put at 2.5%, the same as this year. Imports are projected to outpace exports, contributing to a further decline in net exports and a slightly smaller current account surplus as a share of GDP than in 2007.

Philippines

The projection for 2007 GDP growth is upgraded sharply to 6.6% from 5.4% in *ADO 2007*. This economy grew much faster than expected in the first half, with gains in net exports, private consumption, and government spending. Remittances from overseas workers continue to support residential real estate investment and private consumption, providing a strong impetus to overall growth. Government spending surged ahead of elections in May.

Investment in durable equipment grew in the first 6 months of this year, for the first time in 2 years. With a tepid rise in imports, net exports contributed significantly to growth. Buoyed by remittances and a narrower trade deficit, the current account surplus is set to rise to 5.4% of GDP in 2007, revised up from 3.2% projected earlier. Inflation pressures have subsided significantly with a stronger currency and receding effects of an increase in the value-added tax rate in early 2006. The 2007 inflation forecast is downgraded to 2.9% from 4.8%.

For 2008, the GDP growth forecast is revised up to 6.0% from 5.7% in *ADO 2007*. Consumption should remain underpinned by remittances. Government spending on infrastructure is projected to support growth in construction, and private investment shows signs of picking up following improvements in the fiscal position and lower inflation. The 2008 inflation forecast is revised down to 3.5% from 5.0%, assuming normal weather patterns, and the current account surplus is now projected to be around 5% of GDP, raised from the *ADO 2007* prediction.

Singapore

This economy grew by 7.6% in the first half of 2007, faster than anticipated in *ADO 2007*. Financial services and tourism performed strongly, driven in part by buoyant economies throughout the subregion. Construction activity surged, supported by a boom in high-end apartment building as well as new office and retail projects and two large resorts. The GDP growth forecast for 2007 is raised to 7.5% from 6.0%

in March. Growth is projected to ease to 6.0% in 2008 (revised up a half percentage point from *ADO 2007*).

Despite buoyant domestic demand, inflation pressures are less than expected. The 2007 inflation forecast is trimmed to 1.2% from 1.6%. Inflation is expected to edge higher from the second half of 2007, in part because of an increase in the goods and services tax from July 2007.

Furthermore, a strong labor market (the unemployment rate was just 2.4% in the second quarter) and rising rents are likely to engender upward pressure on costs for businesses. The inflation forecast for 2008 is revised up slightly to 1.2%. Weaker than expected growth in imports has prompted a revision in the 2007 current account surplus forecast to 28.5% from 27.0% of GDP, although the 2008 projection is maintained at 27.0%.

Thailand

The projections for growth remain the same as in *ADO 2007*. GDP growth is expected to slow to 4.0% this year, the lowest rate in 6 years, as domestic demand has weakened. Political and policy uncertainties have undermined consumer and business sentiment. The external side has performed better than expected, with both agricultural and industrial exports posting broad-based gains, while imports have risen at a modest rate, in part suppressed by weak domestic demand and a decline in oil imports.

The current account surplus is expected to increase to 3% of GDP compared with 1.3% projected in *ADO 2007*. Inflation pressures have moderated substantially, and the 2007 forecast is revised down to 2.0%.

Assuming political and policy uncertainties are reduced in the aftermath of elections scheduled for late 2007, GDP growth is expected to accelerate to 5.0% in 2008, as projected in *ADO 2007*. Consumer and business confidence will likely revive and the new government is expected to continue with the public infrastructure program. Domestic demand should be supported by reductions in interest rates in 2007.

Inflation is anticipated to rise modestly (to 2.5%, unchanged from *ADO 2007*) as domestic demand picks up. Projected firm global growth should prop up exports, in spite of lower commodity prices and the strength of the baht since 2005. The current account surplus is projected to narrow as imports increase faster with stronger domestic demand.

Viet Nam

Strong economic momentum has been underpinned by closer integration with global markets that culminated in WTO membership in January this year. The projections for GDP growth in 2007 and 2008 (8.3% and 8.5%, respectively) have not changed from March.

Vigorous growth of industry and services has more than offset the weaker performance of agriculture, affected by drought, avian flu, and other livestock diseases. Demand growth has been broad-based, partly driven by buoyant liquidity and expansionary fiscal policy. Private consumption and investment are expanding robustly.

Inflation pressures remain high though, and the projections for 2007 and 2008 have been revised up (to 7.8% and 6.8%, respectively). Much of the inflation reflects strong overall demand, but the adverse effects of weather and livestock disease on food supply have also contributed.

The projections for the current account have been revised to deficits for both 2007 and 2008 from small surpluses expected in *ADO 2007*. Export growth moderated in the first half of 2007 and imports rose faster than expected.

Other economies

Cambodia continues to consolidate its rapid economic growth based on agriculture, construction, clothing, and tourism. Double-digit GDP growth was recorded from 2004 to 2006, with last year's rate revised up to 10.8%, from the 10.4% estimated in *ADO 2007*. Partly as a result of this higher base, the growth forecast for 2007 is edged down to 9.2% from 9.5%. For 2008, the outlook has become somewhat clouded by increasing competition in clothing export markets from the PRC and Viet Nam. The 2008 GDP forecast is lowered by 1 percentage point to 8.0%. The expected deceleration in economic activity has led to a slight narrowing of forecast current account deficits.

The Lao People's Democratic Republic is benefiting from growth in mining (gold and copper) and hydropower, both attracting significant foreign direct investment, and from infrastructure development. Improvements in the trade and investment climate are planned by the Government as part of its effort to join WTO. GDP growth forecasts are maintained at 6.8% for 2007 and 6.5% for 2008. Inflation has slowed, despite an acceleration in broad money growth, and is expected to average about 5% this year and next.

In Myanmar, GDP growth is expected to continue at a moderate pace and the current account to be supported by natural gas exports. A sharp hike in the price of fuel in August 2007 and higher prices of rice are likely to keep strong pressure on inflation.

The Pacific

Subregional performance

The aggregate growth projection for the 14 Pacific developing member countries in 2007 is revised down to 3.5% from 4.5% in *ADO 2007*, mainly because a rebound in Timor-Leste (the subregion's third biggest economy) has not been as strong as expected, and political instability has led to a deeper than expected contraction in the Fiji Islands (the second largest economy). Tonga's economy, too, is set to contract.

The downgrade in the outlook comes despite a higher growth projection for Papua New Guinea (the largest economy). Although the aggregate forecast is revised down, this year is still expected to exceed subregional growth of 2.6% in 2006 (revised down from 3.1% in *ADO 2007*). The subregional inflation projection for 2007 is raised to 4.7% from 3.5%, primarily in anticipation of the pass-through of exchange-rate depreciation and earlier increases in international oil prices.

Subregional prospects

For 2008, aggregate growth is revised up to 3.2% from 2.8% in *ADO 2007*. This follows an upgrading of economic growth prospects for Papua New Guinea. That would put subregional expansion next year close to

this year's modest level. Fiji Islands and Tonga are expected to resume growth in 2008, albeit at low levels. Timor-Leste, which is recovering from a slump last year, will grow more moderately next year. Subregional inflation is projected to decelerate to 3.2% next year, slightly below the earlier projection.

Recent events have highlighted governance challenges in the subregion. Papua New Guinea and Timor-Leste experienced some violence linked to national elections earlier this year, while episodes of serious civil unrest occurred last year in Solomon Islands, Timor-Leste, and Tonga, and a military coup took place in the Fiji Islands. The macroeconomic management responses undertaken, together with international support provided to most of these countries as well as relatively high export prices, point to the likelihood of these economies growing in 2008. But the underlying weaknesses in governance and the associated constraints to growth remain to be treated.

Growth prospects in the Pacific are also crimped by underinvestment in physical infrastructure and human capital, and insufficient support for private sector-led development. High government wages bills are key causes of the underinvestment, as they compress expenditure on essential goods and services, and on capital works. This constraint has intensified in several economies where public sector wages have been hiked.

A more supportive approach to private investment is required to realize the potential for growth. Continued action to raise the responsiveness of governments to business and community needs, and to enhance accountability, is central to improving public policy and making better use of public resources. Gains in these areas are in turn critical to averting future episodes of civil disorder and political instability.

Country highlights

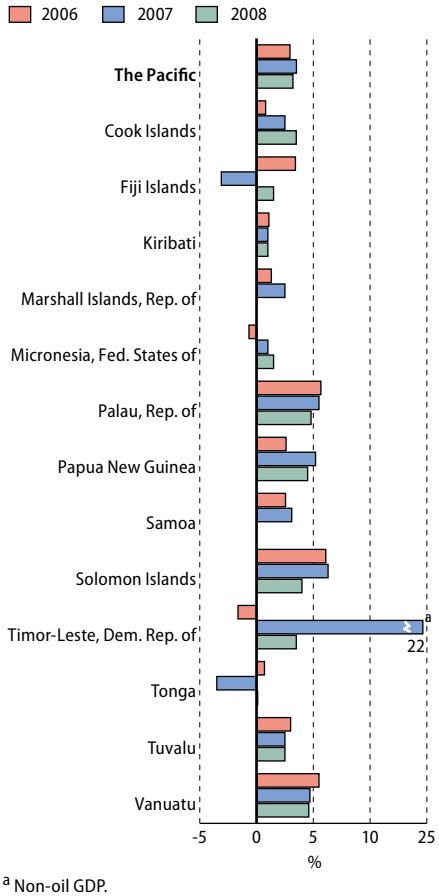
Fiji Islands

The *ADO 2007* forecast, for a decline of 2.3% in output, is revised to a sharper contraction of 3.1%. This reflects an updated expectation of a fall, rather than slight growth, in sugar production, linked to a progressive reduction in preferential prices paid by the European Union; a sharper than forecast drop of 10% in tourism earnings following the military coup in December 2006; a decline in clothing production as the industry continues to adjust to the loss of trade concessions; and a reduction in crop production caused by flooding early this year.

Building and construction is still forecast to contract by around 20% as a result of reduced public and private investment, exacerbated by the introduction of a credit ceiling on home loans. Business confidence remains low and the retail sales outlook is gloomy. The *ADO 2007* inflation forecast of 3.0% in 2007 is revised up to 4.1%, partly because of the floods (which raised food prices) and the pass-through of earlier increases in oil prices.

Falls in sugar and clothing exports are expected to more than offset rises in exports of fish, forestry products, and mineral water, with the result that exports, according to official estimates, will decline by 2.6%. Merchandise imports are projected to fall by about 2.0% because of the damping effects of the economic contraction and tighter macroeconomic policies. A rise in personal remittances should go some way toward

1.3.5 GDP growth, The Pacific



[a] Non-oil GDP.

Sources: Asian Development Outlook database; staff estimates.

Click here for figure data

cushioning a drop in official transfers and tourism receipts, but the current account deficit may exceed 20% of GDP in 2007.

The central bank has taken several measures to protect declining foreign exchange reserves: it set a credit ceiling on commercial bank lending in November 2006; has tightened exchange controls; and has raised its lending rate to commercial banks. Nonresidents' access to domestic financing is restricted. These steps are buttressed by fiscal measures aimed at containing the budget deficit (exclusive of asset sales) to 2.1% of GDP, most notably through a 5% pay cut for public servants. Yet despite macroeconomic tightening, foreign reserves fell to the equivalent of 3.5 months of import cover by the middle of this year, from 3.7 months at end-2006. The external position remains fragile and may compel the monetary authority to contemplate external borrowing.

Next year, economic growth is expected to resume at a rate of about 1.5%. Tourism income is forecast to pick up as visitor numbers rebuild and price discounting by hotels eases. The country's only gold mine, which closed late in 2006, is restarting operations, and increased sugar production is anticipated as industry restructuring moves forward.

Papua New Guinea

This economy is a producer of gold and copper and a net exporter of oil, with mining and oil generating 13% of GDP and 80% of exports. High world prices for these resources have led a turnaround that has now spread more broadly through the economy. GDP growth of 5.2% is projected for 2007, up from *ADO 2007*'s 4.5%. The growth revision reflects a rise in projected growth of nonmining sectors (mainly agriculture and services), from 4.2% in *ADO 2007* to 5.2%. These sectors are buoyed by generally high prices for agricultural exports and improved business and consumer confidence. The weighted average price of agricultural, forestry, and fishing exports rose by an unexpectedly high 23.3% over the first quarter of 2007.

Employment (outside copper, gold, and oil extraction) rose by 4.1% over that quarter, with higher employment recorded in all regions and most sectors. The broad-based nature of the economic strengthening was evident in a 9.8% rise in credit to the private sector in the first 4 months of 2007, led by increased lending to the services sector and to households. However, the improvement in the business climate was set back by a government decision to cancel mobile telephone licenses issued to two foreign firms and instead reserve market rights to a domestic operator.

Papua New Guinea's inflation rate is forecast to average 4.8% in 2007, revised up from 3.0% in *ADO 2007*. Year-on-year inflation accelerated from 1.8% at end-2006 to 4.4% in March 2007. Price pressures are attributable to a depreciation in the kina and the pass-through of previous increases in world oil prices. A rise in import prices, coupled with higher domestic demand, lifted imports and lowered the trade surplus in the first quarter, contributing to the first current account deficit in 2 years. Gross foreign reserves remained high at $1.7 billion as of end-April (9.5 months of nonmining imports). One concern was an increase in government expenditure in the lead-up to national elections in July, against a background of a higher than expected underlying inflation.

Crude oil production is expected to fall in 2008 due to the natural

decline in output from existing fields. This development is forecast to trim overall economic growth to 4.5%. Nonetheless, this projection is an upgrade from *ADO 2007*, reflecting an expectation of higher mining output on the fact that mining companies have invested to raise production and to extract higher-grade ores. Inflation is expected to ease next year as the currency steadies.

Democratic Republic of Timor-Leste

The economy has revived this year, after the economic contraction in 2006 caused by an outbreak of civil unrest. Spending has been stimulated by the presence of international personnel to support national elections and peacekeeping efforts, by high international prices for coffee (the country's main non-oil export), and by increased public outlays. Budget reports for the first half of the fiscal year (ended 30 June 2007) show that recurrent spending was slower than scheduled, but still faster than a year earlier. Capital and development spending increased to almost three times the year-earlier amount. Total bank deposits, and loans and advances, increased by 3.2% and 4.7%, respectively, in the first quarter of 2007 from end-2006 levels.

Parliamentary elections in June resulted in a new coalition Government, but civil unrest broke out again in August. The need to manage tensions and internal policy differences is likely to complicate government efforts to introduce economic and public-sector initiatives needed to ensure sustained growth in the non-oil economy. Government receipts from the offshore oil and gas industry are rising, but this energy production generates little direct employment in Timor-Leste. The Petroleum Fund, established to save the Government's oil and gas revenues and to generate long-term investment income to fund the budget, increased to $1.4 billion, or almost three times non-oil GDP, at end-June, double the level of a year earlier.

Forecast growth in the non-oil economy for 2007 is revised down from *ADO 2007* to a still-high 22%. Inflation, above expectations in the first quarter of this year mainly because of a rise in food prices caused by a shortage of rice, is now forecast at 8.0% for the whole year, revised up from 5.0%. Economic growth in 2008 is projected to slow from this year's rebound, largely on the basis that civil unrest eases, allowing for a decline in the international presence. A pay increase for public servants and government efforts to raise the rate of investment spending are projected to help achieve moderate growth of 3.5%.

Other Pacific economies

Samoa

This economy is expected to achieve the growth forecast of *ADO 2007* (3.1%), with economic activity stimulated by preparations for the 2007 South Pacific Games in August–September 2007, major public sector projects, rising tourist numbers, and high levels of remittances. As of May 2007, bank lending was up by about 25% from a year earlier. Monetary policy was tightened slightly in response to early signs that sustained growth may be overheating the economy—as of May official foreign reserves of $72.9 million, or 3.9 months of imports, were below the central bank's target of 4.0 months of import cover, and underlying

inflation had risen to 5.0%. The full-year inflation forecast has been lifted to 5.0%.

Solomon Islands

The new estimate of 6.3% growth in 2007, revised up from 5.0% in *ADO 2007*, largely reflects an acceleration in the (unsustainable) harvesting and export of logs, as well as faster expansion in palm oil production. The external position is bolstered by strong export growth and inflows of donor grants to finance development projects, including relief and reconstruction projects in response to a tsunami in April that killed 52 people and displaced thousands of others. The tsunami itself is not expected to have a major impact on growth as the affected areas account for only a small share of the economy, and any lost production is expected to be more than offset by increased aid flows.

Foreign reserves in mid-August 2007 were $114.5 million, covering more than 4.5 months of imports of goods and nonfactor services. Inflation is expected to stay at about 8.0%. The *ADO 2007* forecast of an easing in growth in 2008 to 4.0% is maintained. This deceleration reflects a slowdown in logging, linked to the ending of export duty exemptions.

Tonga

The outlook for this economy has deteriorated. It is now forecast to contract by 3.5% in 2007, a revision from *ADO 2007* when flat GDP was foreseen. Factors include a substantial early-2007 fall in remittances, indications that low export prices will reduce plantings of squash (the main agricultural export), and a decline in tourism following riots in the capital in November 2006. These developments add to underlying weakness arising from a downturn in the fishing industry and a near 20% cut in civil service staffing in mid-2006.

On the upside, the currency has steadied, which eased inflation to 3.8% by end-March, about half the rate recorded in mid-2006. The inflation projection for 2007 is revised down to 5.0%, from the *ADO 2007* forecast of 10.0%, reflecting progress in stabilizing both the budget and the balance of payments. An overall budget surplus of 2.0% of GDP is estimated for 2007; reserves were $43.7 million (4.7 months of import cover) at end-March. The economy is expected to recover slowly and be virtually flat in 2008.

Vanuatu

Growth of 4.7% looks set to be achieved in 2007, with tourism-related activities receiving an additional boost from the introduction of new flights to Vanuatu by Air New Zealand and Solomon Airlines. The Government's fiscal position is strained, as expected, by the impact of substantial civil service wage increases, bringing the wages bill up to over half total government expenditure and crowding out capital spending. Inflation is still expected to be around 2.5% this year. In 2008 both GDP growth and inflation will be similar to this year's rates.

Others

In the Cook Islands, growth has picked up from 2006 and is now forecast at 2.5% for this year (revised down from 3.2% in *ADO 2007*). Value-added

tax receipts to May 2007 were 11.4% higher than a year earlier. Visitor arrivals also increased, spurred by a Cook Islands series of the television show "Survivor" and the opening in April of direct flights from Los Angeles to Rarotonga. Pearl exports are expected to improve this year as new pearl farms in Rakahanga come into production. However, the fish catch is down for the second year in a row.

Expected growth this year for the Republic of the Marshall Islands is revised down from 3.5% to 2.5% as a result of cuts in public service staffing. An increase in grant-funded government capital expenditure is helping support economic growth. Additional growth stimulus will come from the reopening, in August 2007, of an upgraded Majuro tuna-loining plant under new management, 3 years after it closed because of financial difficulties. The plant is expected to employ about 650 local workers when it becomes fully operational in December. Inflation is put at 3.1% in 2007, revised upward from 2.4% because of transport cost increases.

In Nauru, the economy is still expected to contract in 2007, but the outlook for next year has improved, since secondary mining of phosphate is scheduled to start then and additional government revenues are expected from offshore fishing rights. Donor-funded construction works are also expected to help the economy recover.

The growth and inflation forecasts for the Federated States of Micronesia made in *ADO 2007* are unchanged. Palau is also expected to achieve the solid growth forecast made for this year. Growth is projected to remain low in Kiribati and Tuvalu.

Part 2

Export dynamics in East Asia

Export dynamics in East Asia

Introduction

Economic growth in East Asia over the past two decades has been underpinned by rapid expansion in manufacturing exports. This surge has been accompanied by a shift in these exports' commodity composition toward machinery categories, which are among the fastest growing sectors in world merchandise trade (ADB 2007). Although the speed of adjustment has varied, countries in the region tended to start with a focus on technologically simple labor-intensive goods such as apparel and footwear, and then moved to a range of more capital-intensive, technologically sophisticated items, especially electrical and nonelectrical machinery.

This process was initially led by Japan, followed by the newly industrialized economies (NIEs) of Hong Kong, China; Republic of Korea (hereafter Korea); Singapore; and Taipei,China; and more recently by Indonesia, Malaysia, Philippines, and Thailand. Over time, real currency appreciation caused these economies to develop more capital-intensive industries and to actively participate in direct investment not only as hosts, but also as investors.

Rapid advances in production technology and technological innovations in transportation and communications have allowed companies to "unbundle" the stages of production so that different tasks can be performed in different places. Also, trade liberalization and investment policy reforms in developing countries have greatly reduced barriers to trade and investment, thereby further encouraging expansion and dispersion of outward direct investment of multinational enterprises (MNEs). These dynamics have resulted in the increasing importance of international product fragmentation—the cross-border dispersion of component production/assembly within vertically integrated production processes[1]—and a shift in the composition of exports toward intermediate goods (parts and components).

These emerging patterns may have implications for the factors that influence export performance. For example, Jones and Kierzkowski (2001) and Arndt and Huemer (2004) have argued that a surge in intermediate goods trade could dilute real exchange rate impacts as there may be high fixed costs in establishing the "service links" that fuse the fragments of the production process together.

This chapter of *Asian Development Outlook 2007 Update* examines the influence of real exchange rate changes on export performance in 1990–2006, a period in which intermediate goods trade burgeoned. To see whether trade in intermediate goods is "special" and to allow comparisons, the analysis is conducted for different categories of exports

and separately for nine economies in East Asia.[2] The analysis is conducted separately for total merchandise exports, manufacturing exports, and exports of Standard International Trade Classification (SITC) 7, which largely consists of machinery and transport equipment parts and components. Though exports are now growing quickly in some countries of South Asia, it has not yet latched onto international production networks to the same degree as East Asia. Besides, comparable data do not exist for South Asian countries.

In the next section, *Changes in export and trade composition*, shifts in the commodity composition of exports and changes in the direction of trade are reviewed. Over the past three decades, manufacturing exports in East Asia have expanded rapidly and gained in relative importance in total exports. Exports of machinery and transport equipment (SITC 7) have increased substantially since the late 1980s, dwarfing traditional manufacturing exports such as textiles, clothing, and footwear. Parts and component exports, most of which are in SITC 7, have also expanded rapidly, highlighting the importance of international product fragmentation. Imports of parts and components in these economies have also risen, illustrating the higher level of import content used in producing manufactures. This form of international specialization has also been accompanied by an increase in the share of intraregional exports. The People's Republic of China (PRC) has become a significant export destination for other economies, particularly for SITC 7 components, as the country's importance as an assembly and shipment hub for final goods has grown.

In *Determinants of export performance,* the analytical approach is explained and the main empirical results are presented. Supply and demand influences on export volumes are considered and their short- and long-run impacts are isolated. Of particular interest is the responsiveness of export volumes to the real exchange rate, the sensitivity of this relationship to different export categories, and how the former changes through time. The data presented in this chapter suggest that, at least through traditional demand and supply channels, export volumes have become less responsive in both the short and long run to real exchange rate changes. It is possible that with changes in market structure and industrial organization, real exchange rate adjustments now occur through other more complex channels.

In the last section, *Conclusions and policy challenges,* possible interpretations for the main results are considered and broad policy questions are posed. The results presented in this chapter add to a wide body of evidence on the determinants of export performance, and confirm the importance of supply-side factors. At-the-border and behind-the-border barriers to trade are also likely to be a key influence on a country's ability to integrate itself in emerging production networks.

Though real exchange rate influences on export performance appear to have been receding in 1990–2006, the particular model employed in this chapter may not have been able to detect influences operating through deeper channels. Indeed, it is highly unlikely that the profound shifts in economic structure that have been observed in East Asia could have occurred without changes in real exchange rates.

Likewise, the increasing complexity that is observed in the export basket of fast-growing countries has been closely associated with secular appreciation of their real exchange rates (ADB 2007). These deeper influences, which may operate at frequencies measured in decades rather than quarters, are likely to work through domestic and cross-border investment decisions, and are a topic for future study.

Changes in export and trade composition

Export-oriented industrialization has been a marked feature of growth and development in East Asia for the past three decades or more. The share of exports in GDP in this region has grown continuously in this period and this rise has been even more pronounced since 2000 (Figure 2.1). Export shares relative to GDP began to diverge from developing-country and world averages in the late 1980s, and by 2005 these shares were some 1.5–2 times as high.

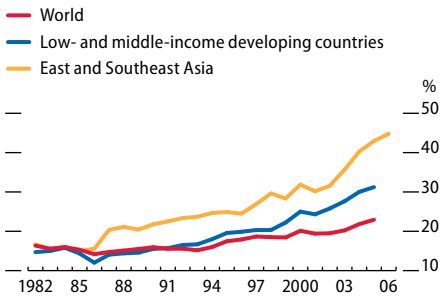
The rise of exports in Asia has followed a distinctive pattern. After Japan's export success in the 1950s and 1960s, the NIEs began to enter export markets as Japan's industrial structure shifted away from labor-intensive to more sophisticated products. Policies supporting exporters then allowed the NIEs to expand their exports in labor-intensive activities in which Japan was losing advantage. However, by the late 1980s, these economies were losing their edge in labor-intensive activities as a result of rising wage costs and attendant real currency appreciation. In addition, the imposition and gradual tightening of quantitative restrictions by industrial countries blunted penetration in textiles, garments, and footwear markets (Wells 1986). These factors encouraged a shift toward more capital-intensive industries and outward direct investment in countries where costs were lower, trends given added impetus by the 1985 Plaza Accord, which saw a sharp revaluation of the yen and a steady appreciation of NIE currencies.

As profitability fell at home, producers from Japan and the NIEs began to move their production platforms to Southeast Asia. Countries there were attractive to investors because of their relatively favorable macroeconomic conditions, and trade and investment policies. On the heels of direct inward investment, an export boom followed in labor-intensive manufacturing.

At the same time, rapid advances in production technology created the opportunity for investors to redesign production processes in ways that accentuated task specialization, i.e., splitting up fabrication and assembly processes. By relocating some segments of the value chain rather than entire industries to lower-cost locations, industries reaped greater profits (Krugman 1995). This process occurred extensively in the electronics industry so that by the mid-1980s, Southeast Asian countries started exporting electronic and other more technologically sophisticated products.

Later, in the early 1990s, the PRC emerged as a fast-growing exporter of labor-intensive manufactures. Product lines "migrated" to the PRC from other countries in East Asia, attracted by its large pool of cheap labor, its rapidly improving infrastructure, and policies favoring exporters.

2.1 Share of exports in GDP



Source: World Bank, *World Development Indicators* online database, downloaded 11 June 2007.

Click here for figure data

Evolution of merchandise trade

The evolution of export and trade patterns in the region can be traced using detailed trade data, specifically the United Nations Commodity Trade Statistics Database (UNCOMTRADE), based on SITC Revision 3 (SITC, Rev. 3), and Statistics Canada World Trade Analyzer for Taipei,China. Figure 2.2 shows how the profile of manufacturing exports has changed over time.[3] In the past three decades, manufacturing exports from East Asian economies have expanded rapidly and gained in relative importance in total merchandise exports. In Hong Kong, China; Korea; and Taipei,China, the proportion of manufacturing to total exports has been persistently high, at around 90% over the past three decades. Other than for Indonesia and Thailand, the share of manufacturing exports has exceeded 75% in the postcrisis period. The share has significantly increased in the Philippines, from 50% in 1991–1995 to more than 90% in 1996–2005, while it has climbed gradually in the other economies.

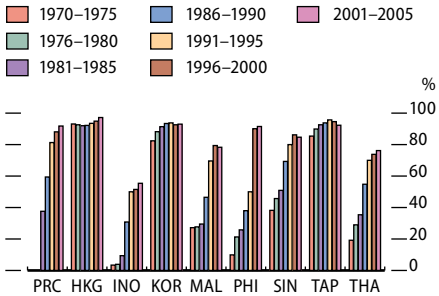
Indonesia has had the slowest rise in manufacturing export shares, despite trade liberalization and export promotion policies from the late 1980s. Nevertheless, by the mid-1990s, manufactured goods contributed around 50% of the country's total merchandise exports, compared with less than 10% at the beginning of the 1980s. But this share has barely moved since the early 1990s. This slow progress would seem to reflect "Dutch Disease," where the hydrocarbon and other natural resource-based export sectors tend to dominate other non-oil manufacturing exports.

Figure 2.3 provides a breakdown for the nine economies of the anatomy of exports within manufacturing.[4] It shows that exports of machinery and transport equipment (SITC 7) have expanded rapidly, dwarfing the traditional manufacturing duo of clothing and footwear (SITC 8). (Indonesia is the only exception to this general pattern.) For the PRC and Hong Kong, China, exports in SITC 7 began to really take off in the early 1990s, reflecting the dominant role of outsourcing activity in manufacturing. In the PRC, the share of SITC 7 in total merchandise exports more than tripled from less than 15% in 1992 to almost 45% in 2006, while in Hong Kong, China, it doubled from 25% to 50% in the same period. SITC 8 in Hong Kong, China declined continuously from 60% in 1970 to 30% in 2006, while in the PRC it rose in 1984–1993 but has since declined constantly. By 2006, the share of SITC 8 was less than 30% of total merchandise exports. The share of other manufacturing exports (chemicals—SITC 5, and basic (resource-based) manufacturing—SITC 6) has shown broad stability.

The trends of SITC 7 exports for Korea and Taipei,China are similar. Both take off in the mid-1980s, becoming the most significant contributor to manufacturing and total exports by the early 1990s. Until then, textiles, clothing, and footwear in SITC 8 played an important role. By 2006, SITC 7 exports accounted for almost 60% of total exports in Korea and about 50% in Taipei,China. SITC 7 exports have also grown in Malaysia and Singapore. By 2006, the share in total exports had surpassed 50% in these two countries.

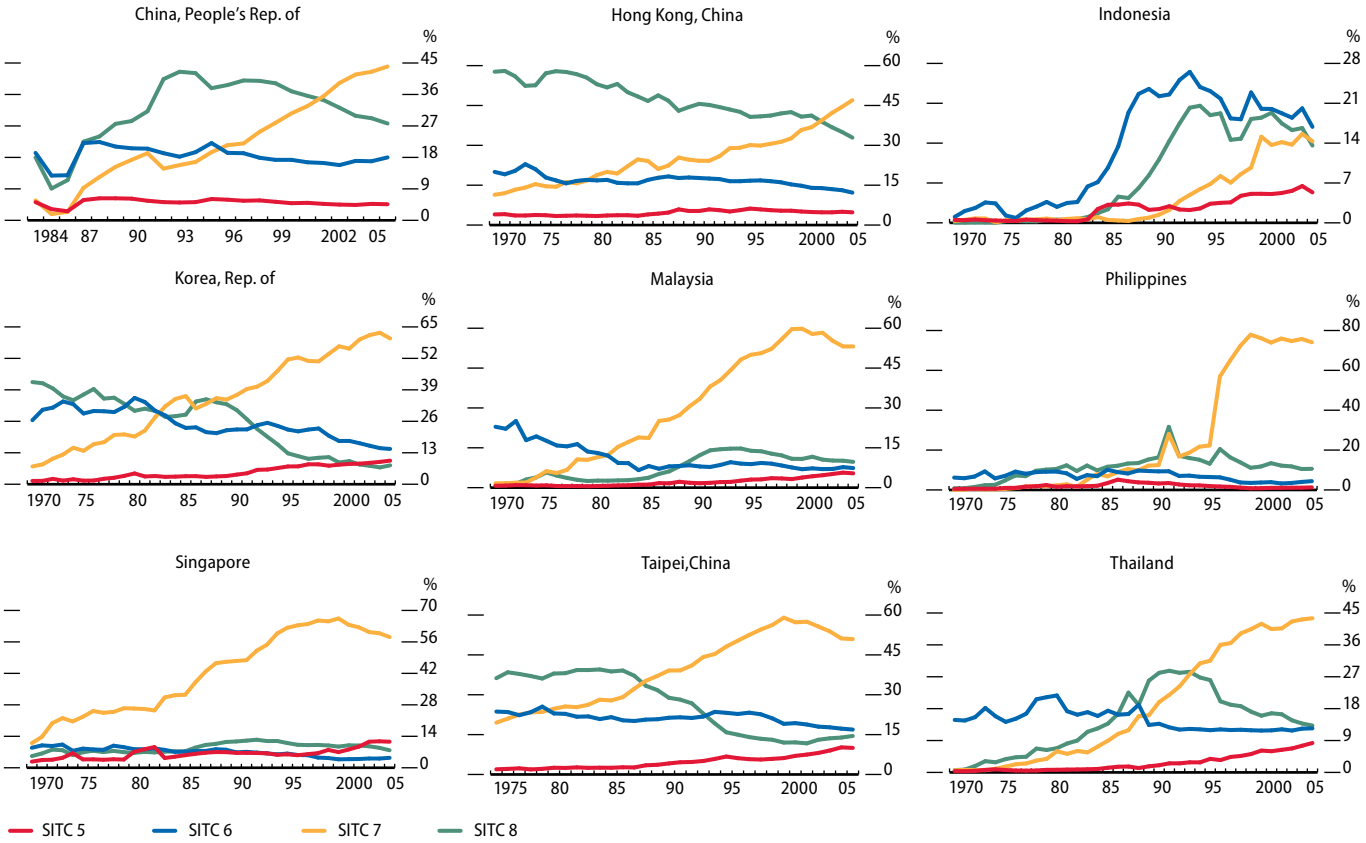
SITC 7 exports show expansion in both the Philippines and Thailand, with a more pronounced surge in the former. By 2000, SITC 7's share had climbed to almost 75% in the Philippines but was around 45% in

2.2 Share of manufacturing exports in total exports



PRC = China, People's Rep. of; HKG = Hong Kong, China; INO = Indonesia; KOR = Korea, Rep. of; MAL = Malaysia; PHI = Philippines; SIN = Singapore; TAP = Taipei,China; THA = Thailand.
Sources: ADB Statistical database system; CEIC Data Company, Ltd.; United Nations Comtrade database, *DESA/UNSD*, all downloaded 16 July 2007.

2.3 Percentage shares of four subcategories in manufacturing exports



Sources: ADB Statistical database system; CEIC Data Company, Ltd.; United Nations Comtrade database, *DESA/UNSD*, all downloaded 16 July 2007.

Thailand, reflecting Thailand's broader export base and deeper industrial structure.

The evolution of Indonesia's export structure is different from the broad drift toward SITC 7 that has occurred in other countries. Resource-base manufacturing, mostly mineral products (SITC 6) and miscellaneous manufacturing (SITC 8), predominantly wearing apparel and footwear, have accounted for almost two thirds of the country's manufactured exports. By 2006, SITC 6 exports contributed almost 20% of total merchandise exports, while SITC 8 contributed about 12%. SITC 7 contributed a similar share as SITC 8 in 2006. In Indonesia, SITC 7's share was far below that in other East Asian economies.

Trade in parts and components

An important feature of international product fragmentation is the increasing significance of trade in parts and components. Box 2.1 discusses the characteristics of such fragmentation. To gain better knowledge of the relative importance of such trade in these nine economies, the SITC 7 five-digit industries from UNCOMTRADE are examined. The items within these classifications are separated into parts and components, and final products, according to the lists of parts and components in Athukorala (2006). The list contains 168 categories at the five-digit level. Note that data on the SITC 7 five-digit industries of Taipei,China are based on Athukorala (2006); also that imports are investigated along with exports to roughly demonstrate the degree of

2.1 International product fragmentation

International product fragmentation is the cross-border dispersion of component production/assembly within vertically integrated production processes. Its expansion has been largely underpinned by three mutually reinforcing developments over the past few decades. First, rapid advancements in production technology have enabled industries to slice up the value chain into finer, portable components. Second, technological innovations in transportation and communications have collapsed the distance once separating the world's nations, and improved the speed, efficiency, and economy of coordinating geographically dispersed production processes. This has facilitated establishment of "service links" to combine various fragments of the production process in a timely and cost-efficient manner (Jones and Kierzkowski 2001). Third, liberalization policy reforms in both home and host countries have removed many barriers to trade and investment (Athukorala 2006).

Recent years have witnessed two other important developments in the process, setting the stage for rapid expansion in the share of fragmentation-based trade in world trade.

First, some fragments of the production process in certain industries have become "standard fragments," which can be effectively used in multiple products. Examples include long-lasting batteries originally developed by computer producers and now widely used in cellular phones and electronic organizers; transmitters, which are used not only in radios but also in personal computers; and electronic chips, which have spread beyond the computer industry into consumer electronics and motor vehicle production (Jones and Kierzkowski 2001, Brown et al. 2003, Athukorala 2006).

Second, the coverage of global assembly operations has seen noteworthy expansion from production and assembly of components to assembly of final products, such as computers, cameras, television sets, and motor cars. Given the heavy initial fixed costs, multinational enterprises (MNEs) are hesitant to establish overseas plants in final assembly without considerable first-hand commercial experience in the host country.

Because of these two developments, overseas production units of MNEs involved in such final stage assembly are located in other industrialized countries or in more advanced NIEs. However, in recent years, the PRC has emerged as an important location for final assembly in many product lines, largely because of the vast domestic market for these products, which naturally reduces the risks of covering the initial establishment costs (Borrus 1999, Athukorala 2006).

Production outsourcing practices were first employed from the late 1970s by Japanese, US, and western European MNEs, but the procedure has been more pronounced since the late 1980s. More recently, MNEs from more advanced developing countries, notably in East Asia, have also joined this process. In response to rapid domestic wage increases, to the growing reluctance of domestic labor to engage in low-paid employment, and to stringent restrictions on the importation of labor, firms in the electronics industry and other durable consumer goods industries in East Asia have begun to produce components and conduct subassembly activities in neighboring countries, where labor costs are still low.

In recent years, outsourcing practices have begun to spread beyond the domain of MNEs. Many companies that are not part of MNEs' networks now procure components globally through "arm's-length" trade. Technological innovations in communications have reduced costs of outsourcing, particularly through lower research costs. The process has also been facilitated by the standardization of some components. However, MNEs are still responsible for the bulk of fragmentation trade (Rangan and Lawrence 1999, Urata 2001, Athukorala 2006).

Over time, the fragmentation process has also expanded to involve many countries in the assembly process at different stages, resulting in product fragments crossing borders repeatedly before they are incorporated into the final product.

import content in these economies and to help understand the role of the real exchange rate in export performance.

Table 2.1 shows the proportion of parts and components in total manufacturing exports and imports in 1990–1996 and 2000–2006.[5]

Exports

Malaysia, Philippines, Singapore, and Thailand stand out in East Asia for their heavy dependence on parts and components for export dynamism. The share of parts and components in total manufacturing exports has increased rapidly in these four countries, reaching over 40% in the first

2.1 Share of parts and components in total manufacturing (%)

Economy	Exports		Imports	
	1990–1996	2000–2006	1990–1996	2000–2006
China, People's Rep. of	5.7	13.9	14.5	31.4
Hong Kong, China	13.4	27.4	15.3	29.7
Indonesia	4.0	12.5	17.7	16.1
Korea, Rep. of	21.8	27.5	26.3	33.2
Malaysia	38.2	42.5	35.0	50.4
Philippines	30.4	60.3	26.2	57.8
Singapore	31.0	46.5	32.7	47.6
Taipei,China	24.5	39.9	32.3	38.7
Thailand	18.9	26.3	22.9	30.8

Sources: United Nations Comtrade database, *DESA/UNSD*; Athukorala (2006) for Taipei,China.

three and about 30% in Thailand, in 2000–2006. Between 1990–1996 and 2000–2006, the share of components in total manufacturing exports more than doubled in the PRC, from 5.7% to 13.9%. In Korea and Taipei,China, the relative importance of components in total manufacturing exports has increased over the years, contradicting the popular belief that these economies had shifted palpably from assembly activities to final goods production.

Even though the share of parts and components in Indonesia rose considerably in the same period, it was because of their initial low export base. In fact, their dollar value remained low relative to those of other economies in the region: in 2005, for example, the dollar value of parts and components exports from Indonesia was about one fourth that of Thailand. The small weight of parts and components and SITC 7 in Indonesian manufacturing exports indicates that the country has been slower than others to integrate in cross-border production networks.

Imports

The share of parts and components in total manufacturing imports also exhibits an upward trend in the region, again with the exception of Indonesia. Manufacturing production relies heavily on imported inputs. The import share of parts and components has more than doubled in the PRC and the Philippines. In the PRC, the share of parts and components imports has expanded more quickly than its share in exports, suggesting an important role for assembly activities.

As argued in Athukorala (2006), while growth in fragmentation-based trade is now a global phenomenon, it is far more important and is growing more rapidly in East Asia than elsewhere in the world. Significant differences in wages and other complementarities among the countries of the region have provided the basis for rapid expansion of an intraregional product-sharing system, giving rise to increased cross-border trade in parts and components. First movers also enjoy considerable benefits in the form of agglomeration economies, not just at an enterprise level, but also at the level of industries, cities, and regions (Barry and Bradley 1997, Ruane and Gorg 2001).

Export destinations

The growing importance of international product fragmentation in these nine economies has been associated with the diversification of export

2.2 Destination of Asian exports (% of total)

Economy/Destination	Total exports		Manufacturing		SITC 7	
	1990–1995	2000–2005	1990–1995	2000–2005	1990–1995	2000–2005
China, People's Rep. of						
United States	15.8	20.8	18.0	22.1	18.5	22.1
Japan	17.1	13.1	14.0	11.9	10.9	10.3
European Union (15 countries)	11.4	16.2	12.0	16.8	11.5	18.7
Other East Asia	33.5	23.3	35.0	22.9	35.4	25.4
Southeast Asia	6.1	7.0	5.1	6.5	8.0	8.0
Other Asia	1.8	2.3	1.6	2.2	2.6	1.6
Rest of the world	14.4	17.3	14.3	17.5	13.1	13.9
Hong Kong, China						
United States	22.1	17.9	23.6	18.7	17.2	11.7
Japan	5.4	5.2	5.4	5.4	3.6	4.8
European Union (15 countries)	14.6	13.6	15.6	13.9	13.1	11.0
China, People's Rep. of	31.3	40.6	29.7	40.0	36.4	49.0
Other East Asia	4.4	4.5	3.9	4.3	5.9	6.1
Southeast Asia	6.4	5.9	6.1	5.8	9.6	7.3
Other Asia	1.0	1.3	1.0	1.3	0.6	0.6
Rest of the world	14.9	11.0	14.8	10.8	13.6	9.5
Indonesia						
United States	13.1	12.4	17.4	18.2	24.7	13.7
Japan	30.5	20.3	14.5	12.6	6.8	14.2
European Union (15 countries)	12.3	12.7	17.6	16.7	13.5	12.8
China, People's Rep. of	3.5	5.7	3.5	3.9	1.3	1.9
Other Southeast Asia	12.5	12.5	11.2	7.6	5.4	6.0
East Asia	12.7	17.3	16.3	21.3	34.9	39.6
Other Asia	1.2	3.9	1.2	2.4	0.8	0.9
Rest of the world	14.2	15.2	18.3	17.1	12.7	10.9
Korea, Rep. of						
United States	22.5	16.5	23.9	17.3	27.1	19.4
Japan	14.8	8.9	12.8	7.2	8.0	5.6
European Union (15 countries)	11.7	12.7	12.5	13.7	15.0	16.5
China, People's Rep. of	4.8	17.3	4.5	16.9	2.5	12.9
Other East Asia	10.2	9.6	9.7	9.3	7.1	9.4
Southeast Asia	11.7	9.9	11.3	9.6	12.5	9.0
Other Asia	2.4	2.6	2.4	2.6	1.6	2.5
Rest of the world	22.0	22.4	22.9	23.3	26.2	24.6
Malaysia						
United States	19.0	19.2	25.5	23.1	29.1	26.2
Japan	13.0	10.7	8.5	8.8	8.2	8.2
European Union (15 countries)	12.8	11.9	14.1	12.8	14.0	13.4
China, People's Rep. of	2.4	5.4	1.4	4.6	0.5	4.3
Other Southeast Asia	10.4	12.0	9.1	11.8	8.4	12.6
East Asia	27.3	24.4	27.0	23.8	28.7	24.2
Other Asia	2.4	3.3	0.7	1.6	0.5	1.0
Rest of the world	12.7	13.1	13.7	13.6	10.5	10.0
Philippines						
United States	36.3	21.4	38.9	22.4	36.7	16.9
Japan	16.1	15.5	12.2	15.4	16.3	15.9
European Union (15 countries)	16.8	16.2	18.2	16.8	15.4	17.4
China, People's Rep. of	1.3	4.9	0.6	4.6	0.1	5.1
Other Southeast Asia	9.8	16.1	9.5	14.8	12.3	17.4
East Asia	9.2	15.6	8.9	15.9	11.4	17.4
Other Asia	0.6	0.3	0.6	0.3	0.2	0.2
Rest of the world	9.9	10.0	11.1	9.8	7.6	9.8

2.2 Destination of Asian exports (% of total) *(continued)*

Economy/Destination	Total exports		Manufacturing		SITC 7	
	1990–1995	2000–2005	1990–1995	2000–2005	1990–1995	2000–2005
Singapore						
United States	18.8	12.7	22.8	14.7	25.8	16.0
Japan	7.4	6.1	5.9	6.2	5.9	5.7
European Union (15 countries)	12.7	11.8	14.8	13.2	16.4	12.5
China, People's Rep. of	2.0	6.2	1.4	6.4	1.0	5.9
Other Southeast Asia	14.6	16.6	13.1	16.4	12.9	17.8
East Asia	24.5	28.3	23.7	27.5	21.5	27.2
Other Asia	3.2	3.6	2.4	3.1	1.6	2.5
Rest of the world	16.9	14.7	15.8	12.7	14.9	12.5
Taipei,China						
United States	27.5	20.1	25.3	18.3	25.0	18.1
Japan	10.8	8.6	6.7	7.0	5.5	7.7
European Union (15 countries)	15.4	13.2	14.4	12.4	17.2	14.3
China, People's Rep. of	9.3	23.0	8.3	20.6	6.9	16.0
Other East Asia	14.1	12.0	12.5	10.9	9.7	11.4
Southeast Asia	11.6	10.1	9.6	8.9	10.2	9.2
Other Asia	0.8	0.8	0.6	0.7	0.3	0.4
Rest of the world	10.5	12.1	22.5	21.2	25.2	22.9
Thailand						
United States	20.3	17.6	22.7	18.9	24.3	16.3
Japan	16.8	14.0	13.3	13.3	14.4	13.9
European Union (15 countries)	15.7	14.4	15.7	15.8	13.1	16.2
China, People's Rep. of	1.8	6.3	0.6	5.3	0.4	5.5
Other Southeast Asia	8.4	8.9	8.1	9.3	7.4	9.5
East Asia	16.9	20.3	19.3	19.6	30.0	21.9
Other Asia	1.4	2.0	1.4	2.1	0.6	1.4
Rest of the world	18.7	16.5	19.0	15.6	9.8	15.3

Note: For this table only, East Asia comprises: People's Republic of China; Hong Kong, China; Republic of Korea; Mongolia; Taipei,China. Southeast Asia comprises: Cambodia, Indonesia, Lao People's Democratic Republic, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Viet Nam.

Sources: United Nations Comtrade database, *DESA/UNSD* downloaded 16 July 2007; Statistics Canada, World Trade Analyzer.

destinations. Table 2.2 compares the composition of total, manufacturing, and SITC 7 exports between 1990–1995 and 2000–2005 in these economies by destination. The colored data points indicate where export shares increased over the comparison period.

It is clear that international product fragmentation taking place in this region has induced more intraregional trade over the past 15 years. In particular, the PRC has become one of the major export destinations for all economies in the region, particularly for SITC 7 exports. In Korea, Malaysia, Philippines, Singapore, and Thailand, export value to the PRC as a share of total exports increased almost five times in this period, at the expense of the US and the European Union (EU). It was only for the PRC that the US and EU have been increasingly important over the past 15 years. The US and EU markets accounted for 21% and 16%, respectively, of the PRC's total export market in 2000–2005, increasing from 16% and 11% in 1990–1995.

In significant measure, the expansion of intraregional trade reflects the PRC's role as an assembly point and its greater reliance on demand from outside the region, the US and EU in particular. Through its

forward linkages to the PRC, the rest of the region also remains dependent on external sources of final demand (see also ADB 2007).

Determinants of export performance

This section examines the determinants of export performance in the East Asian economies, with particular attention to the role of real exchange rates. As detailed above, intra-industry trade in parts and components has become a prominent feature of the region's export trade. As yet, there is no consensus about how this may affect the channels through which real exchange rate changes operate. Some authors (e.g., Jones and Kierzkowski 2001, Arndt and Huemer 2004) have argued that surging intermediate goods trade may dilute the immediate impact of real exchange rates on export performance as intermediate exports, by definition, involve a high proportion of imported parts and components. The depreciation (or appreciation) of a currency lowers (raises) the foreign-currency price of exports but also increases (reduces) the home-currency price of component imports. To the extent that import content costs rise (decline), this will offset any expansion in demand induced by a depreciation (appreciation).

In addition, such studies have pointed out that international product fragmentation requires the establishment of "service links" in order to connect the various fragments of a production process in a seamless, rapid, and cost-efficient manner. Thus, the locational decisions of MNEs conducting assembly activities within an international production network are strongly influenced by the presence of other key variables such as infrastructure, logistic capabilities, the availability of skilled operators, and modern technical and managerial skills (Barry and Bradley 1997, Ruane and Gorg 2001). There is a general tendency for MNE affiliates to become increasingly embedded in host countries the longer they are present, and the more conducive the overall investment climate of the host country becomes over time. In these circumstances, real exchange rate changes are but one part of a far wider set of considerations about where to locate production facilities.

However, some commentators (e.g., Obstfeld 2002, Rauch and Trindade 2002, Hahn 2007) have argued that the increasing importance of product fragmentation and of trade in parts and components induces stronger substitution responses as the presence of production facilities in different countries allows firms to respond more nimbly to international price changes by shifting activities across borders. Hahn (2007) observes that the relatively high output response to relative prices of the intermediate goods sectors is likely to be particularly related to the relatively low degree of product differentiation and subsequently high degree of substitutability and competition between domestic and foreign production.

Ultimately, the influence of the real exchange rate on export performance is an empirical rather than a theoretical issue. Many studies have looked at this question (including those of Goldstein and Khan 1985, Bushe et al. 1986, Arndt and Huemer 2004, Athukorala 2004, and Chinn 2003, 2005). Employing the "imperfect substitution" model used by these authors, new evidence about the role of the real exchange rate on

2.2 Specification of export demand and supply functions

The "imperfect substitution" model is based on conventional equations of demand for and supply of exports. Suppose demand and supply equations have the following log-linear equilibrium relationships:

Export demand:

$$X = \beta_0 - \beta_1 \left(P^X / P^W\right) + \beta_2 Y \quad (1)$$

Export supply:

$$X = \alpha_0 + \alpha_1 \left(P^X / \bar{P}^d\right) + \alpha_2 Z \quad (2)$$

where X = volume of exports, P^X = export price expressed in foreign currency, P^W = price of competing goods in the import markets expressed in foreign currency, $\bar{P}^d = P^d / e$, P^d = price of exportables in the domestic market expressed in local currency, e = nominal exchange rate (local currency per unit of foreign currency), Z = production capacity in the tradable sector, and Y = real income in importing countries, $\alpha_i, \beta_i > 0$.

Equation 1 asserts that demand for exports is negatively related to the relative price of exports and of the competing goods in the import markets. All other things being equal, an increase in the price of exports lowers the demand for exports while a rise in the price of the competing goods increases demand for exports.

Equation 2 presents the supply side of exports. Decisions of firms to export depend on their relative returns between domestic sales and exports given production capacity. The return in domestic sales is measured by the price of close substitute products in the domestic market, i.e. "exportables." An increase in the price of exportables lowers the supply of exports, other things being equal, as there would be larger profits in the local market. Conversely, a rise in export prices and production capacity would increase the supply of exports.

Ideally, equations (1) and (2) should be solved simultaneously. However, such an approach tends to be constrained by data availability, which would be even more severe when conducting a disaggregated multicountry study. Therefore, a number of empirical studies in this research area (e.g., Goldstein and Khan 1985, Bushe et al. 1986, Arndt and Huemer 2004, Athukorala 2004, and Chinn 2003, 2005) examine export behavior using a single-equation approach where both demand and supply equations are solved together to yield an expression for the equilibrium volume of exports as illustrated in equation (3):

$$X = \delta_0 + \delta_1 \left(P^W / \bar{P}^d\right) + \delta_2 Y + \delta_3 Z \quad (3)$$

where $\delta_0 = \dfrac{\alpha_0\beta_1 + \alpha_1\beta_0}{\alpha_1 + \beta_1}$, $\delta_1 = \dfrac{\alpha_1\beta_1}{\alpha_1 + \beta_1}$, $\delta_2 = \dfrac{\alpha_1\beta_2}{\alpha_1 + \beta_1}$,

$\delta_3 = \dfrac{\alpha_2\beta_1}{\alpha_1 + \beta_1}$, and $\delta_1, \delta_2, \delta_3 > 0$.

In other words, the equilibrium volume of exports under the single-equation approach can be rewritten as follows:

$$X = f\left(RER,\ Y,\ Z\right) \quad (4)$$

where *RER* is the real exchange rate, the relative prices of foreign to domestic goods expressed in a common currency.

Note that in a small open economy in which firms are price takers in export markets, equations (1) and (2) cannot be solved simultaneously. If a country is a true price taker, P^X and P^W would be perfectly, or at least very highly, collinear. In this case, the relative price variable would exhibit minimal variability. Therefore, for a true small open economy, the coefficient on the relative price variable cannot be precisely estimated and it may turn out relatively low (statistically insignificant) even when its true value is very large (Browne 1981, Riedel 1988, Athukorala and Riedel 1991). Thus, for a small open economy, equation (1) should be inverted and expressed in terms of P^X (referred to as the inverse demand function), as follows:

$$P^X = \gamma_0 + \gamma_1 X + \gamma_2 P^W + \gamma_3 Y \quad (5)$$

exports is presented in this section. A novel feature of this analysis is that it differentiates between real exchange rate effects on different categories of exports; it also isolates how real exchange rate influences vary across time. Box 2.2 explains export demand and supply relationships and how they are reflected in the empirical model.

2.3 Real exchange rate coefficients

Economy	Total exports			Manufacturing			SITC 7		
	Long-run	Short-run		Long-run	Short-run		Long-run	Short-run	
		No lag	1st lag		No lag	1st lag		No lag	1st lag
China, People's Rep. of	0.60	0.62		0.58	0.58		0.47	0.41	
Hong Kong, China	0.35	0.54	0.39	0.32	0.54	0.30	0.27	0.26	
Indonesia	1.86	1.73	0.35	1.78	1.63	0.39	1.50	1.28	0.41
Korea, Rep. of	0.46	0.28		0.44	0.14		0.28	0.10	
Malaysia	0.78	0.47		0.58	0.31		0.40	0.39	
Philippines	0.11	0.22		0.08	0.35		0.07	0.36	
Singapore	0.41	0.50		0.31	0.41		0.29	0.32	
Taipei,China	0.48	0.27		0.43	0.47			0.35	
Thailand	0.97	0.44		0.69	0.34		0.60	0.33	

Notes: 1. Data on reexports are excluded in this chapter. 2. See Box 2.3 for measurement of the real exchange rate. 3. World demand is measured as the weighted average of the real incomes of key export partners, which together account for 80% of shipments of East Asia to all trading partners. 4. See Appendix 1 for measurement of production capacity. The results are based on the long-run restriction of production capacity to be unity.

Source: Staff estimates.

Before discussing the results, some clarification on what they mean is required. Estimated real exchange rate impacts reflect the confluence of both demand and supply effects on export volumes. Unfortunately, more and better data would be required to disentangle demand–supply effects. In addition, the model is unable to capture the impacts that differences in market structure and/or pricing behavior of firms might make. However, given the dominant role of MNEs in the manufacturing trade of East Asian economies over the period, it is unlikely that individual firms within developing countries are able to influence market structures or to change pricing behavior within an industry (Hobday 1995, 2000).[6] In addition, competition among MNEs in global markets could also limit changes in pricing behavior of firms.

Export relationships are estimated for each of the nine economies using quarterly data for 1990–2006. The empirical analysis links export volumes to the real exchange rate, world demand, and domestic production capacity. (Appendix 1 provides a detailed discussion of the data sources, variable measurement, and period of coverage for each economy. The econometric analysis is also explained more fully there.) The estimation is conducted using procedures pioneered by Hendry et al. 1984, Hendry 1995, and Pesaran et al. 2001. These procedures seek to discover the most parsimonious representation of the true but unknown process generating the volume of exports that is both consistent with the observed data and the theory embedded in the "imperfect substitution" model. Short-run, transitory effects can be recovered, as can long-run ("equilibrium") relationships in which variables move together over protracted periods.

Real exchange rates

The empirical results are shown in Table 2.3 for both the estimated long- and short-run real exchange rate coefficients. (The full regression results are reported in Appendix 2.) First, from the estimates of the long-run real exchange rate, differences are present in the responsiveness of exports to real exchange rates across the three export categories in all economies. The long-run real exchange rate coefficients of machinery and transport equipment (SITC 7) exports are the lowest in all economies while the

2.3 Measuring the real exchange rate

The real exchange rate (RER) is a broad summary measure of the prices of one country relative to the prices of another or to a group of countries, both expressed in a common currency. It can generally be expressed as:

$$RER = \frac{eP^*}{P} = \prod_{i=1}^{I} \frac{\left(eP_i^*\right)^{w_i}}{P_i} \quad (1)$$

where e is the nominal exchange rate defined as units of home currency to a unit of foreign currency, P^* denotes the foreign (world market) price level, P is the domestic price level, and w_i is the weight ($\Sigma w_i=1$). An increase in the value of the RER indicates that foreign goods become more expensive relative to domestic goods, so that international competitiveness improves. An increase (decrease) in the RER is referred to as depreciation (appreciation).

The RER is sometimes used to measure the internal relative price incentive in a particular economy for producing or consuming tradable as opposed to nontradable goods. In this case, the RER is defined as the relative prices of tradable to nontradable goods and is referred to as the internal RER (Hinkle and Nsengiyumva 1999). A rise in the internal RER (a real depreciation) means that the tradable sector has become more competitive in relation to the nontradable sector. Therefore, the incentive structure favors switching of resources from nontradable to tradable production, and demand moves from tradable to nontradable goods.

Even though, in fact, a movement of the internal RER can be used to reflect the country's international competitiveness, it is based on the restrictive assumption that the "law of one price" holds for tradable goods. When it holds, the domestic tradable price is set by international markets adjusted by a nominal exchange rate so that the ability to improve a country's international competitiveness position depends on incentives and profitability in domestic production of the nontradable goods sector. However, when the law of one price does not hold, the internal RER may not accurately reflect the country's international competitiveness (Little et al. 1993, Hinkle and Nsengiyumva 1999).

Concepts of the RER are relatively straightforward, but two key issues are involved in constructing the RER—the choice of prices and country weights.

Choice of prices

The most commonly used price series in constructing the RER for measuring international price competitiveness is the consumer price index (CPI). The CPI has the advantage of being timely, similarly constructed across countries, and available for a wide range of countries over a long time span. CPI-based RER measures, however, tend to provide a good reflection of the purchasing power of the domestic currency instead of a country's international price competitiveness because of the fact that CPI baskets contain a high proportion of nontradables. This makes a CPI-based RER less than ideal for assessing competitiveness (Little et al. 1993 p. 262, Dornbush and Vogelsang 1991 p.4).

Therefore, a measure based on costs of production would be more appropriate in assessing international price competitiveness. In this regard, the producer price index (PPI), which contains a high proportion of tradable goods and is tightly linked with the costs of production, would conceptually be superior to a CPI-based RER.

The internal RER, measured using the PPI-CPI relative price measure, is sometimes used to proxy international price competitiveness. Keeping in mind the basket of goods used in composing price indexes, the PPI adjusted by the nominal exchange rate is used to represent prices of tradable goods, while the CPI is used to reflect nontradable prices. However, as already noted, the internal RER reflects international price competitiveness only when the law of one price holds. This law is unlikely to hold in reality (Kasa 1992, Faruqee 1995, Corsetti and Dedola 2002).

The divergence in the prices of tradable goods (in terms of a common currency) among countries can emanate from several sources. For example, the increasing importance of differentiated characteristics, especially in manufactured goods, causes finite elasticities of demand under an environment of imperfect competition. Transportation costs, trade restrictions, and taxes may cause the prices of tradable goods to vary across countries. The presence of medium-term labor contracts could be another source of distortion in this RER measure, because such contracts keep wages and unit production costs sticky so that producers are often inclined not to adjust prices in response to exchange rate changes.

Although there are at least three price alternatives—CPI-CPI, PPI-PPI, and PPI-CPI—to measure the RER, the box figure shows that these three alternatives tend to move closely with each other so that the pattern of RER of the nine East Asian economies does not seem to be very sensitive to different price measures. The correlation coefficients among these three alternatives in the period 1990–2006 were also very high, i.e., more than 0.8 (box table). As a consequence, alternative price-based RER measures yield virtually identical results in econometric

2.3 Measuring the real exchange rate *(continued)*

analysis. The exception is Singapore, where the correlation coefficients tend to be high only between the PPI-CPI and CPI-CPI based RER measures while they were lower than 0.4 between the PPI-PPI based RER measure and the other two measures.

Country weights

The choice of a weighting scheme depends crucially on the purpose for which the RER is being constructed. For countries where most trade is covered by official data, actual trade (exports plus imports) weights can be used for assessing changes in competitiveness. However, when the intercountry pattern of trade is significantly different for imports and exports, it may be preferable for some analytical purposes to use either export or import weights rather than averaging these together.

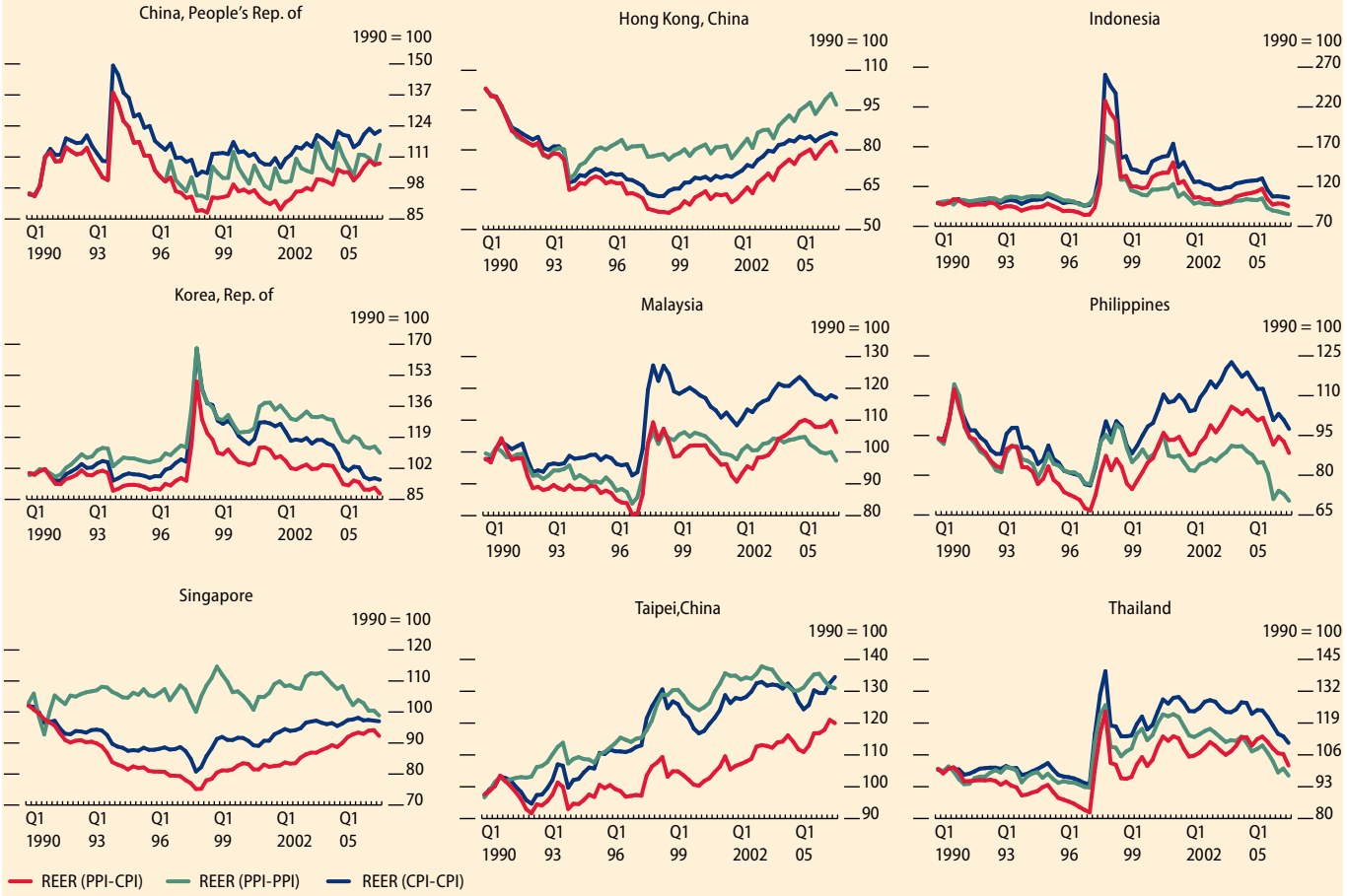
When assessing a country's ability to penetrate world markets, the export weight should be used. As weights should reflect reasonably well the structure of exports in the period being analyzed, the use of current weights is generally preferred (Hinkle and Nsengiyumva 1999).

Correlation coefficients

Economy	PPI-PPI PPI-CPI	PPI-PPI CPI-CPI	PPI-CPI CPI-CPI
China, People's Rep. of	0.90	0.92	0.84
Hong Kong, China	0.93	0.95	0.99
Indonesia	0.92	0.90	0.99
Korea, Rep. of	0.84	0.94	0.96
Malaysia	0.87	0.88	0.86
Philippines	0.87	0.83	0.90
Singapore	0.35	0.23	0.89
Taipei,China	0.82	0.96	0.89
Thailand	0.85	0.94	0.93

Source: Staff calculations.

Alternative price-based RER measures



Source: Staff calculations.

Click here for figure data

coefficients of total merchandise exports are the highest, with those of manufacturing exports coming in between.

These results would seem to suggest that exports of manufactured final products, especially labor-intensive products, are more responsive to changes in the real exchange rate than are exports of SITC 7 products, which have to rely to a greater extent on imported parts and components. In the case of total exports, primary products have a significant weight, and primary products by nature rely heavily on local raw materials compared with manufacturing products. Hence, it is expected that the impact of real exchange rate changes are most prominent in export categories that have a heavier primary weight, and this appears to be confirmed by the data.

Taken together, these results are consistent with the hypothesis that expanding product fragmentation and intermediate goods trade weakens the influence of the real exchange rate on export performance operating through conventional demand and supply channels.

The real exchange rate coefficients also vary considerably across the nine economies. In general, the real exchange rate has the least impact on the Philippines' exports while the impact is the greatest in Indonesia. The long-run coefficients of the real exchange rate in the Philippines in all three categories are less than 0.2, while they all are greater than 1 in the case of Indonesia. This is consistent with the fact that exports and imports in the Philippines have been dominated by parts and components over the past decade. The Philippines' exports are heavily concentrated in electrical machinery with a high reliance on imported components.

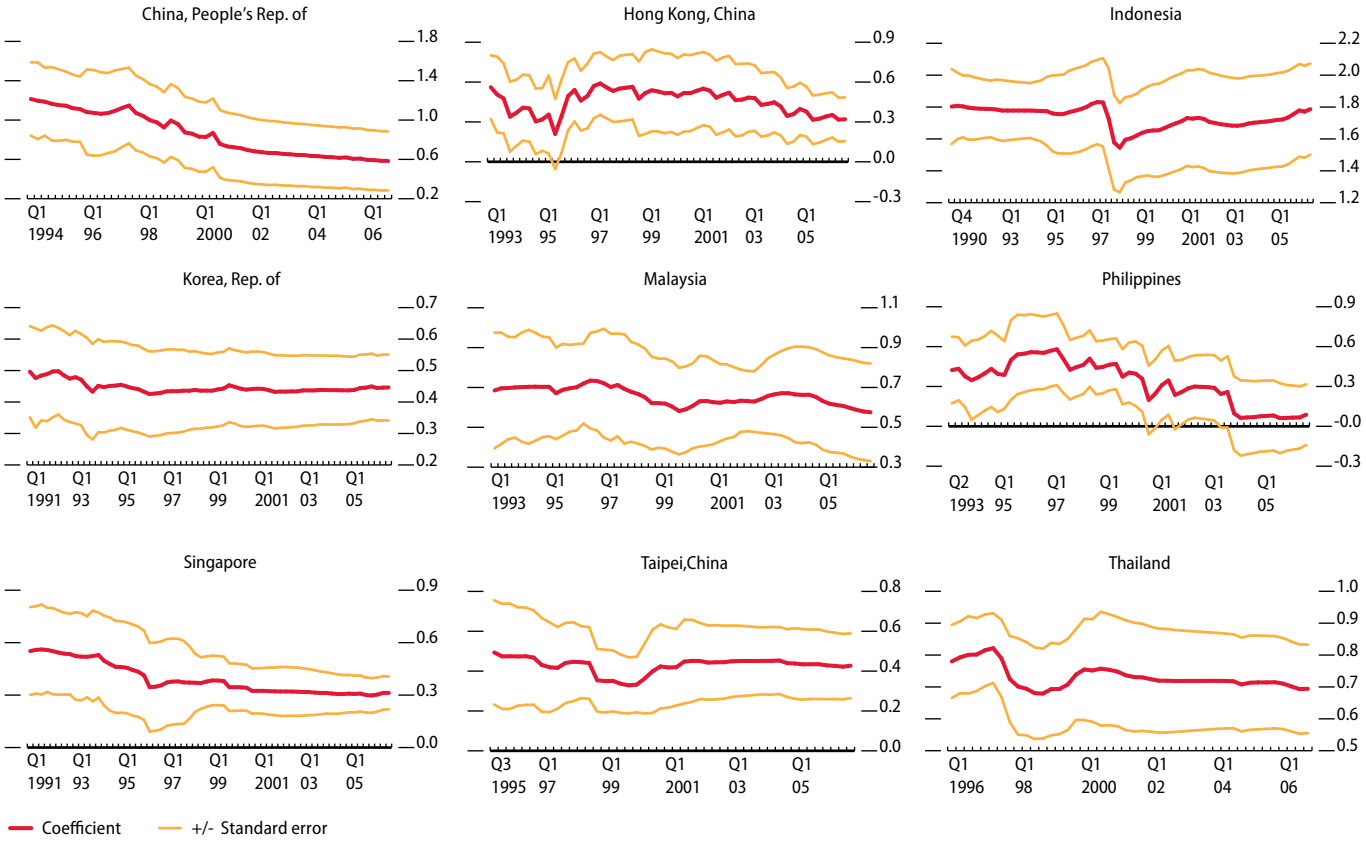
In contrast, Indonesia has much greater product diversification in its export basket. In addition, Indonesia to date has been slow in joining international production networks of MNEs in the SITC 7 category. The reliance on primary and traditional manufactured exports possibly makes Indonesian exports more sensitive to the real exchange rate.

The long-run coefficient on export volume with respect to changes in the real exchange rate in Hong Kong, China; Korea; Singapore; and Taipei,China are all relatively low. For SITC 7 exports, the real exchange rate coefficient in these economies is around 0.3 and is insignificantly different from zero in Taipei,China. In addition to the degree to which parts and components are represented in the export basket, real exchange rate responses will also be influenced by the technological sophistication and complexity of exports. More advanced products may offer fewer opportunities for substitution.

There is only a minor difference in the responsiveness of manufacturing exports and total exports to the real exchange rate in Hong Kong, China; Korea; and Taipei,China, reflecting the relative importance of their manufacturing exports in overall exports. As shown in Figure 2.2 earlier, the contribution of manufacturing exports to total exports has exceeded 85% over the past three decades. In Singapore, the relatively lower share of manufacturing exports in total exports results in a wider gap in long-run coefficients between these two categories.

In Malaysia and Thailand, the long-run real exchange rate coefficients of total exports are comparatively high. This may reflect a more diversified export structure. Despite exhibiting a declining trend, the share of nonmanufacturing products in both economies in 2000–2005

2.4 Recursive estimates of long-run elasticities of manufacturing exports



Note: In recursive estimates, the equation is solved repeatedly, using ever larger subsets of the sample data. The first observations are used to form the first estimated coefficients and then the next observations are added to the dataset and are used to compute the second estimated coefficients. This process is repeated until all the sample points have been used.
Source: Staff calculations.

Click here for figure data

still amounts to more than 20% of total exports, compared to less than 10% in the other economies, except Indonesia.

In the short run, the pattern of the coefficients in all product categories provides a striking resemblance to their long-run estimates, but with lower magnitudes. The real exchange rate still has the highest impact in Indonesia and the lowest in the Philippines, with other economies coming in between. In Taipei,China, the short-run real exchange rate coefficient corresponding to SITC 7 exports becomes statistically significant and is broadly comparable with those in the other NIEs. In Hong Kong, China and Indonesia, the statistical significance of the first lag of the real exchange rate implies that the impact on exports of a current change in the real exchange rate persists over the next quarter.

The influence of trade in parts and components can also be seen in the evolution of the relationship between exports and the real exchange rate. Figure 2.4 shows how the estimated coefficients of the real exchange rate have moved through time. As successive data points are added to the sample, the estimated coefficients of the real exchange rate term drift down. This is a general feature across all nine economies. The decline has been the most pronounced in the Philippines and the PRC. By comparison, the estimated coefficient has barely budged in Indonesia, where trade in parts and components has been small.

Recent economic literature reports similarly low coefficients of real

2.4 Production capacity coefficients

	Total exports			Manufacturing			SITC 7		
	Long-run	Short-run		Long-run	Short-run		Long-run	Short-run	
		1st lag	2nd lag		1st lag	2nd lag		1st lag	2nd lag
China, People's Rep. of	1.24	0.18		1.16	0.21		1.01	0.30	
Hong Kong, China	1.07	0.38		1.04	0.36		1.02		
Indonesia	1.09		0.88	1.07			1.04		
Korea, Rep. of	1.22	0.14		1.01			1.10		
Malaysia	1.08		0.61	1.04		0.35	1.02		0.36
Philippines	1.10			1.08			1.06		
Singapore	1.09		0.15	1.03		0.23	1.01		0.20
Taipei,China	1.07	0.20		1.04	0.11		0.96	0.10	
Thailand	1.07	0.27		0.99	0.33		1.03	0.18	

Source: Staff estimates.

exchange rate responses for parts and components exports. For example, Arndt and Huemer (2004) examine the effect of cross-border production sharing between the US and Mexico on the sensitivity of trade to the real exchange rate in 1989–2002. They, too, employ a single-equation approach. Exports are disaggregated into exports of manufactures, of nonmanufactures, and of motor vehicle parts and components. For the last category, largely seen in MNE production networks, export volumes were found to be unresponsive to changes in the real exchange rate.

Athukorala (2004) investigates the role of the real exchange rate in Thailand's export performance over 1995–2003. Export volume is specified as a function of the real exchange rate, world demand, and capacity utilization, for total manufactured exports and the four subcategories: chemicals (SITC 5), basic (resource-based) manufacturing (SITC 6), machinery and transport equipment (SITC 7), and miscellaneous manufacturing (SITC 8). Athukorala's results point to significant differences in the degree of responsiveness across the four categories, with responsiveness being least for machinery and transport equipment.

Recently, the International Monetary Fund (IMF) (2007) estimated the responsiveness of 16 US goods and services export categories[7] to changes in the real exchange rate in 1973–2002. The standard empirical trade model relating export volumes to relative export prices and foreign income under the assumption of perfectly elastic supply of domestic goods is applied. IMF found that the responsiveness of exports to real exchange rate changes tends to be low in automotive, consumer durable goods, and capital goods sectors in which international product fragmentation tends to be more pronounced, compared with other goods and service export categories.

Production capacity

Within the estimation framework used in this chapter, the declining responsiveness of exports to real exchange rate changes in East Asia seems to imply that other variables influencing export supply and demand may have increased in importance. In particular, production capacity generally plays an important role in determining export performance (Table 2.4). Long-run estimates are not only statistically significant but large in absolute value and are close to 1. This tends to imply that other supply-side factors, such as infrastructure, logistics capabilities, skills, and

2.5 Coefficients of world demand

	Total exports			Manufacturing			SITC 7			
	Long-run	Short-run		Long-run	Short-run		Long-run	Short-run		
		No lag	1st lag		No lag	1st lag		No lag	1st lag	2nd lag
China, People's Rep. of	1.34	2.81		1.27	2.88		1.05	3.31		
Hong Kong, China	0.49	0.54		0.56	0.59		0.60	0.57		
Korea, Rep. of	0.66	0.86	0.32	0.70	0.97	0.43	0.71	1.30	0.17	0.69
Malaysia	0.48	0.62		0.59	0.64		0.68	0.57		
Philippines	0.15	0.25		0.54	0.24		0.57	0.26		
Singapore	0.69	0.49		0.73	0.59		0.75	0.66		
Taipei,China	0.88	0.90		1.00	1.04		1.04	1.10		
Thailand	0.46	0.46		0.56	0.68		0.57	0.82		

Notes: 1. The results are based on the long-run restriction of production capacity to be unity. 2. For Indonesia, there is no statistical significance of external demand influence for all three export categories.

Source: Staff estimates.

the general business climate, are likely to be important in determining export performance. However, in this chapter, no specific assumptions are made about the source of this supply shift effect (Chinn 2003, 2005).[8] The production capacity variable may itself be endogenous and subject to real exchange rate influences. Movements of the real exchange rate could influence revenues and profits of parents and affiliates, although this effect would depend on whether most sales are in the domestic market or are exports. In addition, profits after tax will influence reinvested earnings, and this could affect capacity with some lag (IMF 2003).

Aside from an unusual event—a massive and permanent real appreciation as under the Plaza Accord (above)—movements of the real exchange rate in flexible currencies with managed floats are not predicted to have significant impacts on industrial production capacity in the short run. Hence, theoretically, the real exchange rate is unlikely to be the key factor in influencing production capacity in these economies, because involvement of MNEs plays a pivotal role in determining export capacity and success.

There is a consensus among economists that this involvement is influenced mainly by the general investment climate, which covers a wide range of economic and social factors, such as macroeconomic stability, the general business environment, and institutional context, rather than real exchange rate movements (Wells 1986, Hobday 1995, Yusuf et al. 2003, Fukao et al. 2003, Brooks and Hill 2004, Dollar et al. 2004, Hill 2004). Therefore, the possible indirect effect of the real exchange rate on production capacity is unlikely to dominate investment decisions enough to alter the results of a declining impact of the real exchange rate on export performance explained above.

World demand

Long-run coefficients of world demand vary systematically across export categories (Table 2.5) and are generally inversely correlated with real exchange rate influences. For the PRC, the responsiveness of SITC 7 exports to changes in world demand is low relative to that for manufacturing and total exports but it is still high compared to most other countries. This is possibly because the PRC's own exports are largely in final assembled goods, especially labor-intensive manufactured

products such as clothing and footwear, but also assembled electrical and nonelectrical durable goods.

As shown in Table 2.1 earlier, the proportion of parts and components exports in total manufacturing exports in the PRC in 2000–2006 was still less than 15%. In addition, the PRC's labor-intensive manufactured products figure prominently in the world market. Clothing and footwear from the PRC accounted for more than 20% and 25% of global exports, in 2000–2005, compared with less than 5% for the other economies in the region. Thus, changes in trading partners' demand tend to affect the PRC's final assembly exports more than its parts and components exports. Note that in contrast to other Asian economies, the PRC's exports have tended to rely more on demand from outside the region, particularly from the US and EU markets, over the past decade (Table 2.2 above).

This confirms that even though fragmentation trade has played a pivotal role in deepening intraregional economic interdependence, this has been sustained by continuing strong external reliance on final goods demand (ADB 2007).

In all economies, other than the PRC and Indonesia, the responsiveness of exports to external demand is the highest for SITC 7 while it is the lowest for total exports, with manufacturing exports coming in between. These findings add weight to the observation that emerging patterns of intraregional trade do not necessarily indicate a weakening of integration with external markets outside developing Asia (ADB 2007).

Indonesia again is an outlier. In all export categories, no statistically significant external demand influence can be detected. Primary exports where prices are set in world markets or by global price-setting mechanisms have a high weight in the country's export basket. The insignificance of external demand for SITC 7 could be because Indonesia has not yet actively participated in international product fragmentation, with the result that SITC 7 exports are not sensitive to changes in trading partners' demand.

Conclusions and policy challenges

The main results of this chapter require careful interpretation. The estimation procedures used allow the examination and isolation of the responsiveness of three categories of exports to changes in the real exchange rate. The results are consistent with a growing literature on international trade fragmentation in finding that the direct influence of real exchange rate changes on export performance may be trending downward as intrafirm and intra-industry trade in SITC 7 categories plays an increasingly important role in East Asian trade.

Further research on the interaction of exchange rates, prices, and market structure with trade and investment outcomes may allow these results to be further refined in future work. However, the methodology used here has distinct merit in that it carefully treats each of the three major independent variables and the data on which these independent variables were based. The results point to supply-side variables (production capacity measures) as becoming more important influences on the region's export performance than movements in the real exchange rate, as production networks of MNEs expand.

The results also indicate that the integration of the region through expanding trade in parts and components within the production networks of MNEs is complementary to the deeper process of globalization. The region's exports of final goods are inextricably linked to demand in the broader world economy.

The results of this chapter are broadly supportive of the majority of views expressed in the growing literature on the important role of supply-side factors in regional export performance, especially for manufactured products and in some of the fastest-growing industries in global trade, namely electrical and nonelectrical machinery and transport equipment. Among the potentially most important supply-side factors are those that accommodate the activities of MNEs, which play a leading role in the expansion of trade in the region—and particularly trade in parts and components, both within production networks and through intrafirm trade. This has potentially significant policy implications.

These policy implications include the importance of improvements in business investment climates through increased legal certainty and strengthened governance to enforce contracts, to protect intellectual property, and to ensure that product standards are met. In turn this will require institutional advances that reduce trade costs, such as customs reform and improved infrastructure and logistic services, in order to offset costs incurred in improving legal certainty and enforcement of laws and regulations. Labor productivity and unit labor costs are also quite important in this context, given emerging shortfalls in the availability of skilled workers in countries with aging populations in industrial economies.

MNEs are also averse to ownership restrictions and seek out locations where decisions can be managed effectively between parents and affiliates. Multinationals with large foreign ownership shares tend to have larger export propensities than local firms or affiliates with restricted foreign ownership shares. Multinationals normally accept some exchange rate risk in their multicountry operations and seek to mitigate these through being present in numerous countries. However, MNEs have a tendency to concentrate investment in industrial economies and will come to developing countries only when conditions are conducive. Among the most important of these are macroeconomic stability and potential for growth. East Asia has been successful in attracting foreign direct investment for precisely these reasons.

The protection of intellectual property rights may also be important in influencing the ability and willingness of MNEs to transfer technology and may influence their decisions on where to conduct assembly operations. Beneficial technology and management spillovers are likely to be seen when the supply-side factors are attended to by governments. Macroeconomic conditions are also clearly important in this context as firms look to the potential for domestic markets to expand under stable prices, prudent fiscal policies, and deepening financial markets (largely for equities and bonds). Clearly, more research is needed to determine the relative importance of these diverse variables in export performance. Nor should such analysis ignore the possibility that demand-side factors may take on greater importance in the future, particularly in light of the proliferation of discriminatory trade agreements.

Despite the apparent weakening of the direct influence of changes in the real exchange rate on export performance in the region, there are other indirect channels through which the real exchange rate may influence outcomes—especially, as we have seen, in their possible impact on investment behavior and decisions of firms, especially MNEs. Future research addressing the possible indirect channels through which changes in the real exchange rate may interact with the decision of firms to invest abroad, where to invest, and in what activities, may be useful in this context. The apparent secular appreciation of the real exchange rate in fast-growing East Asian economies, notably those that are major source countries of outward foreign direct investment, might be related to increased sophistication and complexity of export baskets in the region. Included in this future research agenda are further explorations of possible linkages between foreign direct investment, multinational activities and pricing behavior, and alternative exchange rate specifications.

Endnotes

1 This phenomenon has gone under alternative names, such as "vertical specialization" (Hummels et al. 2001, Irwin 2002), "slicing the value chain" (Krugman 1995), "international production sharing" (Ng and Yeats 2001), "outsourcing" (Rangan and Lawrence 1999, Hanson et al. 2001), and "product fragmentation" (Jones 2000, Jones and Kierzkowski 2001, Baldwin 2001, Athukorala 2006).

2 The nine economies in East Asia are the People's Republic of China (PRC); Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei,China; and Thailand.

3 Export data on manufactured goods for the PRC were not available prior to 1981.

4 Disaggregated data on manufactures for the PRC were unavailable prior to 1984 and the data series for Taipei,China begins in 1975.

5 See ADB (2007) for a more detailed discussion of trends and patterns of East Asian trade in parts and components.

6 Most internationally traded manufactured goods are tailor-made, so that their manufacturing process tends to be complex and includes, in addition to assembly, research and development, product design, and marketing activities. Consequently, the role of MNEs in developing countries has become more important for export success. For many SITC 7 items, production technology per se is a proprietary asset, and world production and trade are conducted mainly by a handful of leading MNEs. For consumer manufactured goods, such as apparel and footwear, in which the production technology is likely to involve standard technology, the MNE network is still important in helping domestic firms establish international marketing skills, quality control, and product design.

7 The 16 goods and services export categories are: foods, feeds, and beverages; durable industrial supplies; nondurable industrial supplies; transportation capital goods; IT capital goods; other capital goods; automotive; consumer durables; consumer nondurables; other goods; travel; passenger fares; other transportation; royalties and license fees; other private services; and other services. The simple average of the real exchange rate coefficient is 0.49; incorrect signs of coefficients associated with royalties and license fees and durable industrial supplies are found. The results of the IMF study appear to be consistent with the results reported here.

8 In terms of statistics, the Wu-Hausmann test is conducted to ensure that there is no evidence of simultaneity for any of these variables.

Appendix 1

Econometric procedure, variable measurement, and data sources

Econometric procedure

The econometric analysis in this chapter is based on the general-to-specific modeling (GSM) procedure (Hendry et al. 1984, Wickens and Breusch 1988, Hendry 1995, Pesaran et al. 2001). The GSM procedure is applicable when a set of variables includes series that are nonstationary, or a mixture of nonstationary and stationary. In the case of a finite sample and nonstationary data series, this procedure generally provides more precise estimates than the other two well-known approaches, namely the Phillips Hansen and Johansen procedures. The Johansen procedure in particular, which is based on full vector autoregression, tends to deteriorate significantly in small samples, generating estimates with "fat tails" (frequent outliers) and sometimes substantial mean bias (Hargreaves 1994). Therefore, the GSM procedure is chosen for estimating the behavioral equations in this chapter.

The GSM approach embodies the relationship being investigated within a sufficiently complex dynamic specification, including lagged dependent and independent variables, so that a parsimonious specification of the model can be uncovered. Under this procedure, estimation begins with an autoregressive distribution lag specification of an appropriate lag order:

$$Y_t = \alpha + \sum_{i=1}^{m} A_i Y_{t-i} + \sum_{j=1}^{k} \sum_{i=0}^{m} B_{ij} X_{j,t-i} + \mu_t \qquad (1)$$

where α is a constant, Y_t is the endogenous variable, $X_{j,t}$ is the j^{th} explanatory variable, and A_i and B_{ij} are the parameters.

Equation (1) can be rearranged by subtracting Y_{t-1} on both sides and turns the set of explanatory variables into terms of differences representing the short-run dynamics. The lagged levels of both dependent and explanatory variables are still left in the rearranged functional form on the right-hand-side in order to capture the long-run (cointegrating) relationship in the system (equation 2):

$$\Delta Y_t = \alpha + \sum_{i=1}^{m-1} A_i^* \Delta Y_{t-i} + \sum_{j=1}^{k} \sum_{i=0}^{m-1} B_{ij}^* \Delta X_{j,t-i} + C_0 Y_{t-m} + \sum_{j=1}^{k} C_1 X_{j,t-m} + \mu_t \qquad (2)$$

where $A_i^* = -\left[I - \sum_{i=1}^{m-1} A_i \right]$, $B_{ij}^* = \left[\sum_{i=0}^{m-1} B_{ij} \right]$, $C_0 = -\left[I - \sum_{i=1}^{m} A_i \right]$, $C_1 = \left[\sum_{i=0}^{m} B_{ij} \right]$,

the long-run multiplier of the system is given by $C_0^{-1} C_1$.

Equation (2) can also be rewritten in terms of the general form of the error correction mechanism (ECM) as follows:

$$\Delta Y_t = \alpha + \sum_{i=1}^{m-1} A_i^* \Delta Y_{t-i} + \sum_{j=1}^{k} \sum_{i=0}^{m-1} B_{ij}^* \Delta X_{j,t-i} + C_0 \left[Y_{t-m} + \left(\sum_{j=1}^{k} C_1 \Big/ C_0 \right) X_{j,t-m} \right] + \mu_t \qquad (3)$$

Equation (2) is a particular formulation generally used as the "maintained hypothesis" of the specification search. The dynamics of the general model could be written in many different ways, all of which would yield the same estimates of the unknown parameters. The ECM is generally preferred over other formulations. In particular, an ECM involves a parameterization that clearly distinguishes between short- and long-run effects. This separation makes it an excellent vehicle for either assessing the validity of the long-run implications of theory or for incorporating theoretical insights into the estimation process.

The estimation procedure involves first estimating the unrestricted equation (1), and then progressively simplifying it by restricting statistically insignificant coefficients to zero and reformulating the lag patterns where appropriate in terms of levels and differences to achieve orthogonality. As part of the specification search, it is necessary to check rigorously at every stage for possible misspecification of even the more general types of models. Such checks will involve both a visual examination of the residuals from the fitted version of the model and the use of tests for serial correlation, heteroskedasticity, and normality in the residual, and the appropriateness of the particular functional form used. In particular, any suggestion of autocorrelation in the residuals should lead to a rethink about the form of the general model. The cointegration relationship can be tested through the bound test proposed by Pesaran et al. (2001). Above all, theoretical consistency must be borne in mind throughout the testing procedure.

Variable measurement and data sources

The models in this chapter were estimated using quarterly data. For the producer price equation, the model was estimated for 1987–2006 while the period of coverage for the export equation varies from country to country according to the availability of export data. Table A1 provides the period of coverage for estimating the export equation. The variable measurement and data sources used for the econometric analysis are provided in Table A2.

A1 Period of coverage for econometric analysis of the export function, nine economies

Economy	Coverage
China, People's Rep. of	1993–2006
Hong Kong, China	1991–2006
Indonesia	1990–2006
Korea, Rep. of	1990–2006
Malaysia	1992–2006
Philippines	1991–2006
Singapore	1990–2006
Taipei,China	1994–2006
Thailand	1995–2006

A2 Variable measurement and data sources for econometric analysis, nine economies

	Variable measurement	Data sources
Consumer price index	Index (1990 = 100)	CEIC Data Company Ltd.
Producer price index	Index (1990 = 100)	CEIC Data Company Ltd.
Real effective exchange rate	The ratio of export-weighted producer price indexes of trading partner countries expressed in domestic currency relative to domestic producer prices.	Staff calculations
Nominal exchange rate	The bilateral exchange rate against the US dollar	CEIC Data Company Ltd. and International Monetary Fund, *International Financial Statistics*
Nominal effective exchange rate	The export-weighted bilateral exchange rate (domestic against foreign currencies)	Staff calculations
World demand	The weighted average of real incomes of key export partners. The weight covers 80% of total export partners.	CEIC Data Company Ltd. and staff calculations
Production capacity (total and subcategories)	The Hodrick-Prescott filter of real output (total and subcategories)	CEIC Data Company Ltd. and staff calculations
Export value (total and subcategories)	The export value refers only to domestic exports (i.e., excluding reexports)	CEIC Data Company Ltd.
Export prices (total and subcategories)	Index (1995 = 100)	CEIC Data Company Ltd.
World producer price index	The export-weighted producer price indexes of trading partner countries	CEIC Data Company Ltd. and staff calculations

Note: The nine economies are People's Republic of China; Hong Kong, China; Indonesia; Republic of Korea; Malaysia; Philippines; Singapore; Taipei,China; and Thailand.

Appendix 2

Determinants of exports: Regression results

A1 People's Republic of China

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.01	0.02	0.04
	(1.02)	*(1.51)***	*(2.47)**
Δ(REER)	0.62	0.58	0.41
	*(3.28)**	*(2.93)**	*(2.31)**
Δ(world demand)	2.81	2.88	3.31
	*(7.82)**	*(7.76)**	*(6.56)**
Δ(production capacity, PC_i)$_{-1}$	0.18	0.21	0.30
	*(3.75)**	*(2.24)**	*(2.33)**
Error correction	-0.56	-0.67	-0.52
	*(-6.20)**	*(-8.09)**	*(-4.67)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*(SITC7/PC_i)*
(REER)	0.60	0.58	0.47
	*(1.92)**	*(1.96)**	*(1.52)***
(World demand)	1.34	1.26	1.04
	*(2.91)**	*(2.77)**	*(2.49)**
Trend	0.008	0.009	0.03
	*(2.43)**	*(2.84)**	*(3.32)**
Adjusted R-square	0.84	0.81	0.76
S.E. of regression	0.07	0.07	0.10
LM test for serial correlation	1.75	1.78	0.62
F-test	(p-value = 0.11)	(p-value = 0.11)	(p-value = 0.54)
RESET test for functional form	0.57	3.16	1.04
F-test	(p-value = 0.45)	(p-value = 0.08)	(p-value = 0.31)
J-B test for normality	0.76	1.74	3.03
χ^2	(p-value = 0.68)	(p-value = 0.42)	(p-value = 0.22)
ARCH test for heteroskedasticity	0.01	0.003	2.04
F-test	(p-value = 0.92)	(p-value = 0.95)	(p-value = 0.14)

A2 Hong Kong, China

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.04	0.02	0.03
	*(2.64)**	*(2.11)**	*(4.94)**
Δ(REER)	0.54	0.55	0.26
	*(2.38)**	*(2.19)**	*(1.40)****
$\Delta(REER)_{-1}$	0.39	0.30	
	*(1.62)***	*(1.14)****	
Δ(world demand)	0.54	0.59	0.57
	*(9.43)**	*(8.94)**	*(10.92)**
Δ(production capacity, $PC)_{-1}$	0.38	0.36	
	*(2.12)**	*(1.80)**	
Error correction	-0.42	-0.47	-0.26
	*(-3.43)**	*(-3.26)**	*(-3.18)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*$(SITC7/PC_i)$*
(REER)	0.35	0.32	0.27
	*(1.61)***	*(1.52)***	*(1.51)***
(World demand)	0.49	0.56	0.60
	*(5.07)**	*(5.67)**	*(5.92)**
Trend	0.003	0.004	0.02
	*(2.13)**	*(3.06)**	*(3.55)**
Adjusted R-square	0.73	0.70	0.67
S.E. of regression	0.05	0.06	0.06
LM test for serial correlation	1.71	1.69	0.24
F-test	(p-value = 0.19)	(p-value = 0.19)	(p-value = 0.79)
RESET test for functional form	0.38	0.11	0.85
F-test	(p-value = 0.54)	(p-value = 0.75)	(p-value = 0.36)
J-B test for normality	1.55	2.22	0.67
χ^2	(p-value = 0.46)	(p-value = 0.33)	(p-value = 0.71)
ARCH test for heteroskedasticity	0.06	0.20	0.00
F-test	(p-value = 0.81)	(p-value = 0.65)	(p-value = 0.99)

A3 Indonesia

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.04	0.06	0.15
	*(3.72)**	*(3.57)**	*(3.04)**
Δ(REER)	1.73	1.63	1.28
	*(10.50)**	*(9.24)**	*(5.75)**
$\Delta(REER)_{-1}$	0.35	0.39	0.41
	*(2.17)**	*(1.74)***	*(1.81)**
Δ(production capacity, $PC)_{-1}$	0.88		
	*(2.27)**		
Error correction	-0.09	-0.12	-0.13
	*(-1.91)**	*(-2.19)**	*(-2.20)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*$(SITC7/PC_i)$*
(REER)	1.86	1.78	1.50
	*(9.46)**	*(7.98)**	*(7.12)**
Trend	0.04	0.04	0.06
	*(2.94)**	*(8.43)**	*(2.59)**
Adjusted R-square	0.70	0.66	0.60
S.E. of regression	0.09	0.12	0.19
LM test for serial correlation	0.19	1.68	1.79
F-test	(p-value = 0.82)	(p-value = 0.19)	(p-value = 0.10)
RESET test for functional form	2.99	1.97	1.11
F-test	(p-value = 0.10)	(p-value = 0.07)	(p-value = 0.30)
J-B test for normality	0.39	0.40	2.32
χ^2	(p-value = 0.82)	(p-value = 0.80)	(p-value = 0.31)
ARCH test for heteroskedasticity	0.44	0.19	0.19
F-test	(p-value = 0.51)	(p-value = 0.66)	(p-value = 0.66)

A4 Republic of Korea

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.02	0.02	0.02
	*(3.39)**	*(2.76)**	*(2.08)**
Δ(REER)	0.28	0.14	0.10
	*(2.50)**	*(1.30)****	*(1.32)****
Δ(world demand)	0.84	0.96	1.30
	*(9.10)**	*(12.53)**	*(8.34)**
$\Delta(\text{world demand})_{-1}$	0.32	0.43	0.17
	*(3.46)**	*(5.39)**	*(1.23)****
$\Delta(\text{world demand})_{-2}$			0.69
			*(4.67)**
$\Delta(\text{production capacity, } PC)_{-1}$	0.14		
	*(1.57)***		
Error correction	-0.40	-0.40	-0.40
	*(-3.47)**	*(-3.54)**	*(-3.64)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*$(SITC7/PC_i)$*
(REER)	0.46	0.44	0.28
	*(4.76)**	*(4.25)**	*(1.62)***
(World demand)	0.66	0.70	0.71
	*(5.79)**	*(4.95)**	*(3.32)**
Trend	0.01		
	*(2.94)**		
Adjusted R-square	0.83	0.81	0.75
S.E. of regression	0.04	0.05	0.08
LM test for serial correlation	1.50	1.49	1.69
F-test	(p-value = 0.17)	(p-value = 0.18)	(p-value = 0.12)
RESET test for functional form	0.13	1.10	0.46
F-test	(p-value = 0.72)	(p-value = 0.29)	(p-value = 0.50)
J-B test for normality	2.00	3.10	1.86
χ^2	(p-value = 0.36)	(p-value = 0.21)	(p-value = 0.39)
ARCH test for heteroskedasticity	0.25	1.05	0.12
F-test	(p-value = 0.61)	(p-value = 0.31)	(p-value = 0.72)

A5 Malaysia

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.01	0.02	0.02
	*(2.58)**	*(2.75)**	*(2.49)**
Δ(REER)	0.47	0.31	0.39
	*(3.96)**	*(3.48)**	*(2.97)**
Δ(world demand)	0.62	0.64	0.57
	*(5.11)**	*(3.92)**	*(3.01)**
$\Delta(\text{production capacity, } PC)_{-2}$	0.61	0.35	0.36
	*(4.30)**	*(2.28)**	*(2.02)**
Error correction	-0.11	-0.16	-0.11
	*(-2.04)**	*(-1.92)**	*(-1.53)***
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*$(SITC7/PC_i)$*
(REER)	0.78	0.57	0.40
	*(5.56)**	*(2.35)**	*(1.59)***
(World demand)	0.48	0.59	0.68
	*(3.86)**	*(1.52)***	*(1.32)****
Trend		0.01	0.01
		*(4.97)**	*(4.84)**
Adjusted R-square	0.60	0.59	0.57
S.E. of regression	0.04	0.05	0.06
LM test for serial correlation	0.31	0.68	0.31
F-test	(p-value = 0.73)	(p-value = 0.50)	(p-value = 0.73)
RESET test for functional form	0.33	0.06	0.03
F-test	(p-value = 0.57)	(p-value = 0.81)	(p-value = 0.87)
J-B test for normality	2.34	1.38	1.57
χ^2	(p-value = 0.31)	(p-value = 0.50)	(p-value = 0.46)
ARCH test for heteroskedasticity	0.61	0.003	0.33
F-test	(p-value = 0.44)	(p-value = 0.95)	(p-value = 0.56)

A6 Philippines

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.004	-0.01	-0.01
	(0.81)	*(-1.14)*	*(2.07)**
Δ(REER)	0.22	0.35	0.36
	*(2.12)**	*(2.01)**	*(2.07)**
Δ(world demand)	0.25	0.25	0.26
	*(2.21)**	*(1.35)****	*(1.36)****
Error correction	-0.49	-0.24	-0.28
	*(-5.72)**	*(-2.97)**	*(-3.15)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*$(SITC7/PC_i)$*
(REER)	0.11	0.08	0.07
	*(1.76)**	*(1.57)***	*(1.52)***
(World demand)	0.15	0.54	0.57
	*(1.32)****	*(2.59)**	*(2.51)**
Trend	0.008	0.02	0.02
	*(10.35)**	*(11.83)**	*(12.73)**
Adjusted R-square	0.68	0.65	0.68
S.E. of regression	0.06	0.05	0.05
LM test for serial correlation	1.51	1.54	1.26
F-test	(p-value = 0.20)	(p-value = 0.22)	(p-value = 0.29)
RESET test for functional form	0.07	0.06	0.06
F-test	(p-value = 0.78)	(p-value = 0.80)	(p-value = 0.80)
J-B test for normality	2.88	0.15	0.19
χ^2	(p-value = 0.24)	(p-value = 0.93)	(p-value = 0.91)
ARCH test for heteroskedasticity	1.22	1.25	1.54
F-test	(p-value = 0.31)	(p-value = 0.29)	(p-value = 0.18)

A7 Singapore

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.01	0.01	0.01
	*(2.04)**	*(2.25)**	*(2.06)**
Δ(REER)	0.50	0.41	0.32
	*(1.52)***	*(1.65)***	*(1.57)***
Δ(world demand)	0.49	0.59	0.66
	*(4.43)**	*(5.35)**	*(5.22)**
Δ(production capacity, $PC)_{-2}$	0.15	0.23	0.20
	*(1.24)****	*(2.07)**	*(1.67)***
Error correction	-0.29	-0.30	-0.18
	*(-3.28)**	*(-3.49)**	*(-2.51)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*$(SITC7/PC_i)$*
(REER)	0.41	0.31	0.29
	*(6.72)**	*(2.31)**	*(1.52)***
(World demand)	0.69	0.73	0.75
	*(3.05)**	*(3.17)***	*(2.57)**
Trend	0.006	0.006	0.006
	*(10.13)**	*(10.02)**	*(7.93)**
Adjusted R-square	0.69	0.63	0.68
S.E. of regression	0.05	0.05	0.05
LM test for serial correlation	0.86	0.39	0.61
F-test	(p-value = 0.43)	(p-value = 0.68)	(p-value = 0.54)
RESET test for functional form	0.29	0.001	0.07
F-test	(p-value = 0.59)	(p-value = 0.97)	(p-value = 0.80)
J-B test for normality	0.36	0.90	0.75
χ^2	(p-value = 0.83)	(p-value = 0.64)	(p-value = 0.68)
ARCH test for heteroskedasticity	1.14	0.62	0.08
F-test	(p-value = 0.29)	(p-value = 0.43)	(p-value = 0.78)

A8 Taipei,China

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.01	0.01	0.02
	*(2.44)**	*(2.45)**	*(2.32)**
Δ(REER)	0.27	0.47	0.35
	*(1.42)***	*(2.17)**	*(1.32)****
Δ(world demand)	0.90	1.04	1.10
	*(11.88)**	*(11.95)**	*(10.18)**
Δ(production capacity, $PC)_{-1}$	0.20	0.11	0.10
	*(1.23)****	*(1.56)***	*(1.54)***
Error correction	-0.50	-0.49	-0.37
	*(-4.59)**	*(-4.52)**	*(-3.30)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*($SITC7/PC_i$)*
(REER)	0.48	0.43	
	*(3.84)**	*(2.63)**	
(World demand)	0.88	1.00	1.04
	*(6.64)**	*(8.42)**	*(6.23)**
Adjusted R-square	0.80	0.80	0.77
S.E. of regression	0.03	0.04	0.05
LM test for serial correlation	0.12	1.73	1.76
F-test	(p-value = 0.88)	(p-value = 0.12)	(p-value = 0.18)
RESET test for functional form	0.03	0.003	0.08
F-test	(p-value = 0.86)	(p-value = 0.95)	(p-value = 0.78)
J-B test for normality	0.14	2.68	1.84
χ^2	(p-value = 0.93)	(p-value = 0.26)	(p-value = 0.39)
ARCH test for heteroskedasticity	0.86	3.20	2.09
F-test	(p-value = 0.35)	(p-value = 0.10)	(p-value = 0.14)

A9 Thailand

	Total exports (TE)	Manufacturing exports (ME)	SITC 7 exports (SITC7)
Short-run coefficient	*(ΔTE)*	*(ΔME)*	*(ΔSITC7)*
Constant	0.01	0.01	0.01
	*(1.92)**	*(0.96)*	*(1.14)*
Δ(REER)	0.44	0.34	0.33
	*(2.99)**	*(2.54)**	*(2.56)**
Δ(world demand)	0.46	0.68	0.82
	*(2.60)**	*(4.39)**	*(4.66)**
Δ(production capacity, $PC)_{-1}$	0.27	0.33	0.18
	*(1.47)***	*(2.06)**	*(1.84)**
Error correction	-0.16	-0.47	-0.43
	*(-1.66)***	*(-4.52)**	*(-3.99)**
Long-run coefficient	*(TE/PC_i)*	*(ME/PC_i)*	*($SITC7/PC_i$)*
(REER)	0.97	0.69	0.60
	*(6.23)**	*(5.00)**	*(3.28)**
(World demand)	0.46	0.56	0.57
	*(1.60)***	*(2.68)**	*(1.83)**
Adjusted R-square	0.80	0.80	0.75
S.E. of regression	0.03	0.04	0.05
LM test for serial correlation	0.49	1.75	2.60
F-test	(p-value = 0.62)	(p-value = 0.19)	(p-value = 0.10)
RESET test for functional form	1.64	0.10	0.33
F-test	(p-value = 0.21)	(p-value = 0.75)	(p-value = 0.56)
J-B test for normality	2.65	0.75	1.45
χ^2	(p-value = 0.27)	(p-value = 0.68)	(p-value = 0.48)
ARCH test for heteroskedasticity	1.87	0.19	0.22
F-test	(p-value = 0.14)	(p-value = 0.67)	(p-value = 0.64)

Notes: T-ratios are given in parentheses: * Significant at the 1% level; ** Significant at the 5% level; and *** Significant at the 10% level. The long-run coefficients corresponding to production capacity in all economies are not significantly different from 1 so that results reported here are based on the imposition of long-run production capacity coefficient to be equal to 1. This is also done to ensure the stability of model in the long run. All variables are measured in natural logarithms so that the regression coefficients can be interpreted as elasticities.

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Part 3

Economic trends and prospects in developing Asia

Bangladesh

Growth in gross domestic product (GDP), inflation, and the current account surplus for FY2007 (ended 30 June 2007) came in close to the projections made in March this year, in *Asian Development Outlook 2007* (*ADO 2007*). For FY2008, this *Update* slightly revises down the earlier projection of GDP growth, but foresees higher inflation and a slightly wider current account surplus. The growth and external outlooks remain positive, though curbing inflation remains a challenge. Economic prospects will also depend on the caretaker Government's success in maintaining political stability and broad public support.

Updated assessment

GDP growth remained robust at an estimated 6.5% in FY2007, propelled by rising domestic and external demand. A strong expansion in industry (9.5%) and continued buoyancy in services (6.7%) largely offset agriculture's moderation following its postflood bounceback of the preceding year (Figure 3.1.1). Industry was sustained by strength in manufacturing (up 11.2%), in turn driven by continued growth in external demand for garments. The manufacturing and trade performance sustained steady expansion in services.

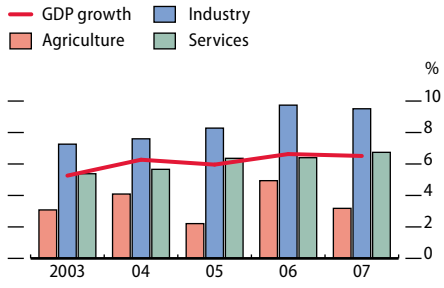
On the expenditure side, growth was underpinned by private consumption. Private investment, aided by growth in bank credit and workers' remittances, also contributed to sustaining economic expansion. But total investment, at 24.3% of GDP in FY2007, declined by 0.4 percentage points compared with the preceding year, on moderation in public investment following downsizing of the annual development program. Net exports of goods and services were a slightly negative factor that subtracted from growth, though by less than in the previous year.

Inflation continued to creep up, to 9.2% in June 2007 on a year-on-year basis, with increases in both food and nonfood prices (Figure 3.1.2). Rising domestic demand pressures, stemming from a steady expansion of income, a large increase in workers' remittances from abroad, and high monetary growth heightened inflationary pressures, as did a further rise in international food and commodity prices. Imported fuel has only a limited impact given its small weight (4%) in the index and low energy intensity of production.

The Government's recent administrative measures to counter inflation, such as investigations of certain businesses suspected of hoarding supplies; measures to regulate stock levels and prices; as well as its encouragement to new importers to enter the market and so induce greater competition, appear to have had no discernible impact on inflation. They have, rather, created uncertainty in the business environment, contributing to price pressures.

Bangladesh Bank gave tightening guidance for monetary policy in FY2007, without adjusting policy rates, reserve requirements, or liquidity ratios, instead relying on open-market operations. Treasury bill yields and

3.1.1 GDP growth



Source: Bangladesh Bureau of Statistics, *National Accounts Statistics*, June 2007.

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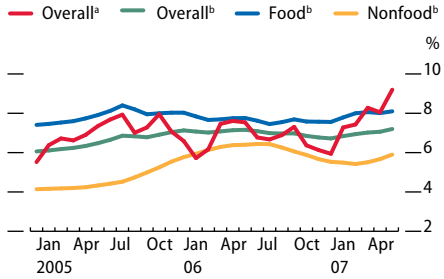
3.1.2 Change in consumer price index and components



[a] Year on year. [b] 12-month moving average.

Source: Bangladesh Bank, *Economic Trends*, July 2007, available: http://www.bangladesh-bank.org, downloaded 14 August 2007.

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bank lending and deposit rates increased only marginally during the year. Broad money (M2) growth reached a record high of 22% in December 2006 (Figure 3.1.3), slowed in subsequent months to 17% in June, but still substantially exceeded the central bank's program target of 14.7%.

Growth in net foreign assets held by Bangladesh Bank increased substantially, by 52.0% over the year to June 2007 and accounted for about one third of the increase in M2. Growth in credit to the private sector at 15.1% for the year (18.3% in FY2006) was contained partly by erosion in business confidence following the caretaker Government's anticorruption measures. Growth in credit to government expanded rapidly to peak at 35.9% in December 2006 but fell to 13.9% by June 2007, in large part reflecting disbursement of budgetary support from the World Bank.

At 10.6% of GDP, revenue collection in FY2007 was lower by 0.1 percentage point of GDP than the previous year (Figure 3.1.4). Despite a rise in current expenditures, overall spending was held down by reduced development outlays. The fiscal deficit came in on target at 3.7% of GDP: 2.1% financed domestically and 1.6% abroad. Although Bangladesh has high nominal rates for corporate income tax and value-added tax (VAT), it has much lower revenue productivity than most other Asian countries. To achieve the required revenue buoyancy and thereby enhance the tax ratio, it is essential to reform the tax laws and streamline tax administration.

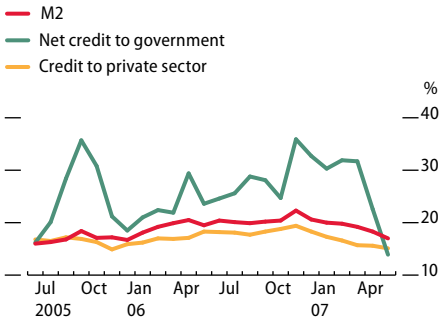
The losses of state-owned enterprises (SOEs) and associated quasi-fiscal obligations pose a significant fiscal risk in the period ahead. In FY2007, the combined net loss of the 44 nonfinancial SOEs was estimated at $613 million, or about 1% of GDP, widening from a $425 million loss in the previous year. Administrative prices of fuel, electricity, and fertilizer, and operations of the government-owned airline caused most of the losses in this area.

A 16–21% upward adjustment in fuel prices in April 2007 helped limit losses at Bangladesh Petroleum Corporation (BPC) to an estimated $460 million (0.7% of GDP) in FY2007. Following the adjustment, domestic prices of the two major products, diesel and kerosene, amounted to 79% of breakeven costs (calculated using July 2007 international product prices). Without any further changes in domestic and international prices, BPC's losses are forecast at $364 million, or 0.5% of GDP, in FY2008.

To facilitate the Corporation's operations, the Government is assuming its overdue bank loans (contracted largely to cover past losses). These will be financed through a $1.1 billion bond to be issued in FY2008, which would provide the banks with an earning asset. However, to avoid re-accumulation of losses at BPC and of nonperforming loans (NPLs) at the four nationalized commercial banks (NCBs), the Government needs to quickly introduce an automatic price adjustment mechanism and improve the Corporation's operating efficiency.

The losses of the Bangladesh Power Development Board should also fall, because the electricity tariff to the distribution companies was raised by 10% in March 2007. However, these companies may pass on only a 5% increase to urban consumers. But switching over to a cost-reflective tariff structure for generation would be more desirable as the annual loss of the Board, even at new tariffs, is estimated at $200 million in FY2007.

3.1.3 Growth of monetary indicators



Source: Bangladesh Bank, *Economic Trends*, July 2007, available: http://www.bangladesh-bank.org, downloaded 14 August 2007.

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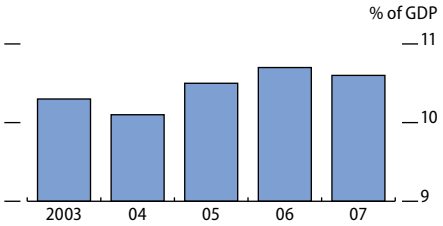
3.1.4 Government revenues



Source: Asian Development Outlook database.

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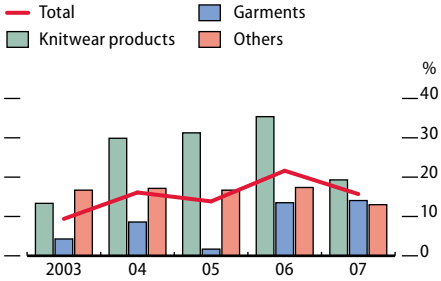
No substantial changes have been made to reduce fertilizer losses. Finally, Biman Bangladesh Airlines, the loss-making state-owned carrier, is to be made a public limited company as a first step in fostering commercial operations, leading to eventual partial privatization.

Exports grew by 15.8% in FY2007, essentially reflecting robust performance in the garments industry (Figure 3.1.5). Concurrently, imports rose by 16.6%. The rise in the trade deficit was more than offset by a 25% surge in officially recorded overseas workers' remittances, owing to an increased number of workers abroad, as well as efforts to bring in remittances through official channels. The current account surplus rose to an estimated $952 million, or 1.4% of GDP, for the year. The capital account, including a large errors and omissions item, shifted to a $541 million surplus from a $486 million deficit a year earlier, mainly reflecting a swing in the short-term borrowing item from large net repayments to large borrowing. International reserves amounted to $5.1 billion in June 2007, a rise of $1.6 billion during the fiscal year (Figure 3.1.6).

The performance of the banking sector improved with liberalization, entry of new private sector banks, and strengthened regulation and supervision. But the financial intermediation cost is still high, with a large volume of NPLs.

The Dhaka Stock Exchange general index surged by 60.5% in FY2007, buoyed by strong domestic institutional buying (Figure 3.1.7). The upward trend in prices was interrupted in early August 2007 as global financial turbulence buffeted many stock markets. However, the index fully recovered and went to new highs by end-August. Market capitalization had already exceeded $7.0 billion by end-June 2007, pushing it to 11% of GDP from a meager 6% a year previously. But the market remains small compared with those of its regional peers, and more company listings are needed for further development.

3.1.5 Growth in exports and components



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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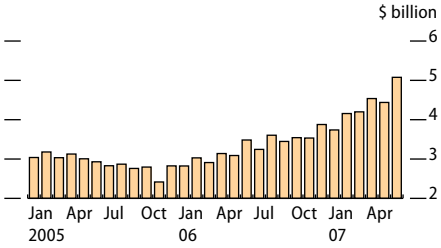
3.1.6 Gross international reserves



Source: Bangladesh Bank, *Economic Trends*, July 2007, available: http://www.bangladesh-bank.org, downloaded 14 August 2007.

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Prospects

Key baseline assumptions for the FY2008 forecast are similar to *ADO 2007*'s: the authorities will continue measures to promote macroeconomic stability with a focus on curbing inflation, raising revenues, and pursuing a more flexible approach to exchange rate management. The spotlight of structural measures will stay on revamping SOEs and fostering financial sector reforms.

The caretaker Government appointed in January 2007 (by the president who postponed Parliamentary elections and stepped down as the head of the caretaker Government) has enjoyed widespread public support for its anticorruption campaign as well as efforts to strengthen the electoral process and advance previously stalled economic reforms. This Government has indicated its commitment to completing electoral reforms by end-2008. Nevertheless, political uncertainty will prevail until new elections are held, slated before end-2008.

GDP growth is forecast at 6.5% in FY2008, lowered slightly from the *ADO 2007* projection because of recent floods, which have fortunately been less severe than those in recent years. Despite the floods, agriculture is expected to show growth of 2.8%, slightly less than last year. Rising

3.1.7 Dhaka Stock Exchange general index

Source: CEIC Data Company Ltd., downloaded 31 August 2007.

Click here for figure data

official development assistance and larger private flows are expected to raise investment, including in power generation. The conditions for the expansion of industry remain favorable because of a likely continued uptrend in export-oriented manufacturing and new capacity in textiles, garments, light engineering, and power. Services seem set to climb in line with the steady expansion in industry.

This *Update* raises the inflation projection for FY2008 to 7.0% from the 6.0% in *ADO 2007* because of heightened pressures in the second half of FY2007. Bangladesh Bank's monetary policy statement, announced in mid-July 2007, set an objective of limiting inflation to a range of 6.5–7.0% in FY2008. The statement noted that the central bank would review the need for adjusting its policy instruments. Maintaining a cautious monetary policy stance will be a challenge since the recent flooding has occurred at a time of high monetary expansion and rising inflation. Nevertheless, achieving the upper end of the range appears feasible, though it would represent a marginal improvement over FY2007.

The strength of the external sector in FY2008 is likely to be sustained, with strong growth in overseas workers' remittances offsetting the rising trade deficit. Although the ending of the quota arrangements in garments and textiles has so far had a positive impact on Bangladesh, the country still runs the risk of facing tough competition in its two largest markets—the European Union and the United States (US)—as the "safeguard quota" provisions on the People's Republic of China expire at end-2008. To retain competitiveness, Bangladesh needs to cut lead-times for delivering garments, upgrade labor skills, and improve its infrastructure.

The thrust of the FY2008 budget is to create a stable environment for accelerated economic growth. In FY2008, although revenue is projected to rise to 10.8% of GDP, higher expenditure, caused by a rise in development spending, is forecast to widen the fiscal deficit to 4.2% of GDP. Strong efforts to meet the revenue target will be needed because any greater bank borrowing to finance planned expenditure would push reliance on banking system finance to a level that would undermine monetary control and accelerate inflation.

Between the introduction of a flexible exchange rate regime at end-May 2003 and end-June 2006, the taka depreciated: by 17% against the US dollar and by 11.5% in terms of the real effective exchange rate (Figure 3.1.8). This has supported growth in exports and remittances. But in FY2007, because of higher foreign exchange inflows from a notable improvement in the current and capital accounts, the taka appreciated slightly against the dollar and by 2.5% in real effective terms. Given comfortable reserves, the central bank is in a position to allow some greater flexibility in the exchange rate in line with market trends, intervening only to correct disorderly movements.

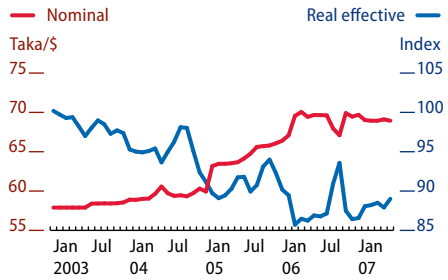
Bangladesh faces various risks that could derail these projections. Political uncertainty, however, is the key one. The outlook will depend crucially on the caretaker Government's success in maintaining political stability with broad public support until the elections are held. Any material setback on the political front would undermine business confidence and negatively affect investment and growth.

3.1.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	6.5	6.5	7.0	6.5
Inflation	7.0	7.2	6.0	7.0
Current acct. bal. (share of GDP)	1.0	1.4	0.2	1.0

Sources: Bangladesh Bureau of Statistics; staff estimates.

3.1.8 Exchange rates



Source: Bangladesh Bank, *Economic Trends*, July 2007, available: http://www.bangladesh-bank.org, downloaded 14 August 2007.

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People's Republic of China

GDP growth reached 11.5% in the first half of 2007, buoyed by exports, investment, and consumption. The authorities redoubled efforts to rein in investment and exports, such as increasing interest rates, banks' reserve requirements, and taxes on some exports, but to date, these steps have had limited impact. This *Update* raises the GDP growth forecast, made in *Asian Development Outlook 2007* (*ADO 2007*), to 11.2% for 2007, and 10.8% for 2008. Inflation has risen, mainly the result of a run-up in food prices. The inflation projection is lifted to 4.2% this year and 3.8% in 2008, but there is a risk that the actual outturn could be higher still.

Updated assessment

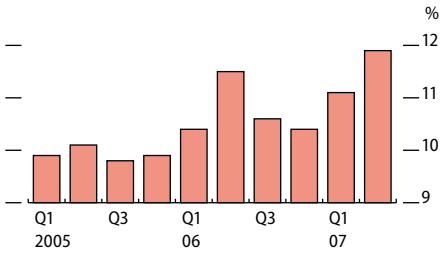
GDP growth accelerated in the People's Republic of China (PRC) from 11.1% in the first quarter of 2007 to 11.9% in the second (Figure 3.2.1), fueled by a widening trade surplus, by galloping investment across the board, and by buoyant private consumption. Growth of 11.5% in the first half of the year was at its fastest rate since 1994, despite measures by the authorities to constrain investment and exports. On the supply side, growth was again led by industry (especially heavy industry), where value added rose by 13.6% in the first half, faster than services' 10.6% and agriculture's 4.0%. Strong momentum in the real economy is underlined by an upward revision of 2006's GDP growth rate, which is now placed at 11.1%.

Underlying drivers of investment, including strong profitability, buoyant sales, and still-low lending rates, remained strong. With industrial profits improving by about 42% in the first 5 months of this year, growth in fixed asset investment accelerated to 28.7% in the second quarter from 26.0% in the first (Figure 3.2.2). Investment administered by local governments grew by 28.1% in January–June, nearly double the equivalent central government rate, suggesting that efforts by the center to tighten investment at the local level have as yet had little impact. Strong profit growth in industries such as steel, electricity, chemicals, and oil processing continues to encourage investment in these sectors. Factors underpinning profits are rising productivity in manufacturing and low, government-controlled prices for domestically produced energy and resources, with the costs of environmental degradation not being internalized by polluters.

Supported by government policies to boost the rural economy, investment in agriculture surged by 37.5% in the first 6 months, faster than that in industry (29.0%), and services (24.6%). Provincial governments have strong incentives to maintain rapid investment, partly since local fiscal revenue depends heavily on receipts of value-added tax, which are boosted by new investment projects.

Reflecting the pickup in consumption, retail sales grew by 15.4% in the first half, up from 13.4% in the year-earlier period (Figure 3.2.3). Two main factors are driving consumption growth. One is rising incomes,

3.2.1 GDP growth



Source: China.org.cn, available: http://www.china.org.cn/e-news/index.htm, downloaded 31 August 2007.

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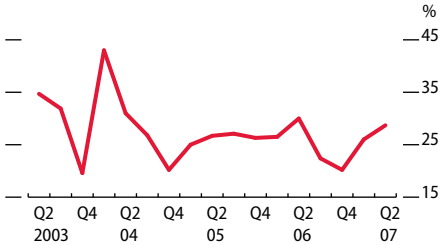
3.2.2 Fixed asset investment growth



Sources: CEIC Data Company Ltd., downloaded 31 August 2007; staff estimates.

Click here for figure data

supported by enterprise profits, salary increases for civil servants, higher minimum wages for some employees, and policies to stimulate the economy in rural areas. Urban and rural incomes in real terms rose by 14.2% and 13.3%, respectively, in January–June (Figure 3.2.4). The second is that, as central and local governments pay more attention to social security and increase investment in education, health care, and low-cost housing, some households may be encouraged to release savings and spend more. Consumers stepped up spending on big-ticket items, such as housing and automobiles. Sales of automobiles jumped by 36.7% in the first 6 months of the year, albeit from what is still a low base.

External demand was strong, too, in the first half. Merchandise exports rose by 27.6%, much faster than import growth of 18.2%, lifting the trade surplus to $112.5 billion (Figure 3.2.5). Temporary factors probably helped boost exports, including decisions by many firms to bring forward export shipments to before the imposition of midyear government measures to help limit the trade surplus. Import growth was damped by high global prices for commodities such as oil and agricultural products.

The growth rate for some exports could slow in the second half: from 1 June 2007, an export tariff was imposed on 142 products, while export tax rebates were reduced or abolished in July for 2,831 items. The aim is to rein back the growing trade surplus and at the same time ease strains on the environment by reducing goods production that requires high inputs of energy and natural resources, and that causes high levels of pollution. Accordingly, the Government has taken steps to curtail lending to polluting industries. Exports are forecast to grow by 20% and imports by 16% in the second half of 2007, resulting in a record full-year trade surplus of around $300 billion, up more than 60% from 2006.

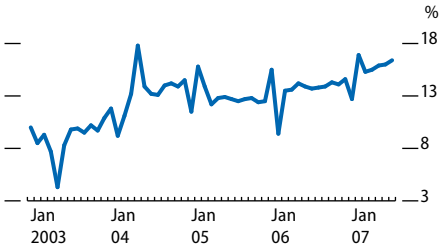
Based on the updated assessment of domestic and external demand, the full-year 2007 GDP growth forecast is revised to 11.2%, from 10.0% in *ADO 2007*. The current account surplus is now expected to swell to 10.9% of GDP, revised up from 8.8%.

Rapid economic growth in the first 6 months of 2007 helped create 6.3 million jobs in urban areas, 70% of the year's urban employment goal. The Government has introduced free training and subsidized job-search services, and plans to revitalize efforts to find work for laid-off workers, retired armed forces personnel, and others who find it difficult to integrate into the formal job market.

An upturn in inflation, mainly caused by food price increases, is raising concerns. The consumer price index rose by 3.9% in the January–August period from a year earlier, exceeding the 3.0% target set by the central bank for all of 2007. In August, inflation reached 6.5%. Rising global grain prices was one reason for the spike in food prices. Another is an outbreak in the PRC of a pig disease that caused shortages, and pushed up prices, of pork. The producer price index rose by 2.4% in the first 6 months, well below the pace of consumer prices, since despite high international prices for oil and other raw materials, many of their domestic prices are controlled by the Government. The net effect of the higher than expected food prices has led to a revision in the full-year inflation forecast to 4.2% from 1.8% in *ADO 2007*.

Rising stock and property values also pose challenges: these markets

3.2.3 Retail sales growth



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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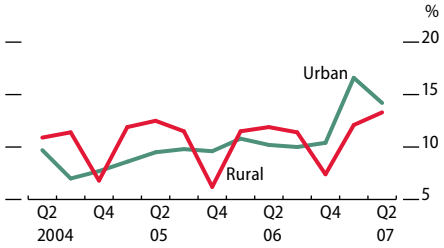
3.2.4 Real income growth



Sources: National Bureau of Statistics, *China Statistical Abstract 2007*, and *China Monthly Economic Indicators*, various years.

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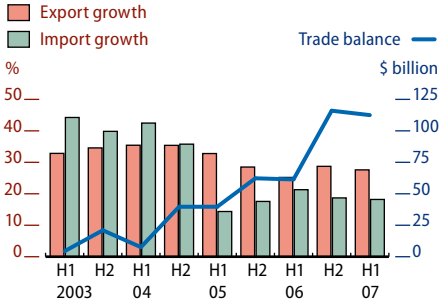
3.2.5 Trade indicators



Source: National Bureau of Statistics, *China Monthly Economic Indicators*, various years.

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continued to boom in the first half of the year. After several years of dull performance, stock prices started to soar in 2006 when a long-standing issue concerning the future of state-owned nontradable shares was resolved in a way that eased market concerns. Excessive liquidity in the financial system and relatively unattractive bank deposit interest rates have also been key factors. The Shanghai A-share index (for shares available to domestic investors) nearly doubled in the first 8 months of 2007, after a 130% leap last year (Figure 3.2.6). To curb market speculation, the authorities in May raised the stamp duty on stock transactions and brought in measures to curb the use of bank loans for stock market speculation. These steps had limited impact. After an initial decline, the A-share index rebounded to reach a new record high by end-July, and was largely impervious to August's turbulence in global credit and equity markets.

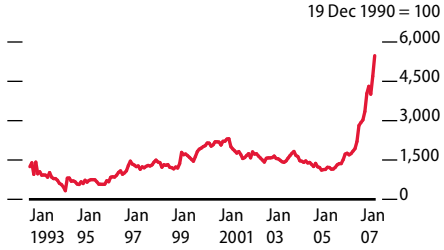
Housing prices have accelerated in many cities this year (and rose at double-digit rates in some, including Beijing and Nanjing) due to excessive liquidity and a surge in demand. Sales of new houses nationwide jumped by 22.5% in the first half.

Persistently high trade surpluses and capital inflows have further boosted foreign exchange reserves, complicating monetary policy. Reserves reached $1.3 trillion by end-June, up by $266 billion in 6 months (Figure 3.2.7). The trade surplus ($122.5 billion) and actual foreign direct investment (FDI) (up 12.2% to $31.9 billion), accounted for 54% of the total foreign exchange accumulation in the first half of 2007, while non-FDI capital inflows contributed 46% (against just 3.0% in 2006). The main reason for much higher non-FDI inflows was repatriation of the substantial proceeds from initial public offerings of shares by PRC banks and companies launched mainly in the Hong Kong, China stock market. The authorities are concerned that capital inflows are being used to speculate in domestic stock and property markets, and on a greater appreciation of the yuan.

The People's Bank of China, the central bank, has continued to drain excess liquidity from the banking system but has not completely offset capital inflows. Broad money supply (M2) grew by 18.5% in July from a year earlier (Figure 3.2.8), above the central bank's target of 16.0%. Bank lending also is strong: loan growth was 16.5% at end-July (Figure 3.2.9). The authorities allowed the yuan's appreciation against the US dollar to accelerate slightly in nominal terms to 4.4% in the second quarter of 2007 (year on year), from 3.7% in the first and 2.8% in all of 2006 (Figure 3.2.10).

Among its efforts to curtail liquidity and to tame investment, the Government took several financial measures in the first 9 months of 2007, including further increases in interest rates (the 1-year benchmark lending rate was raised from 6.12% to 7.02%; Figure 3.2.11.) and in the commercial banks' reserve-requirement ratio (from 9.5% to 12.5%; Figure 3.2.12), in addition to the imposition of export tariffs and the cuts in export tax rebates. These measures built on successive steps taken over recent years. But the effectiveness of interest rate rises in cooling demand is hindered by seepages into liquidity of rising foreign exchange reserves and by the fact that the economy is still not fully market-based. Incentives, particularly at the local level, to build more production plants and real

3.2.6 Shanghai stock exchange index, A-share



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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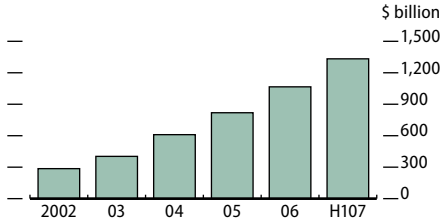
3.2.7 Foreign exchange reserves



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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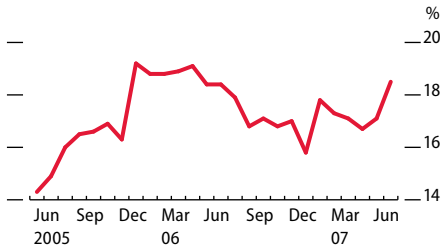
3.2.8 Money supply (M2) growth



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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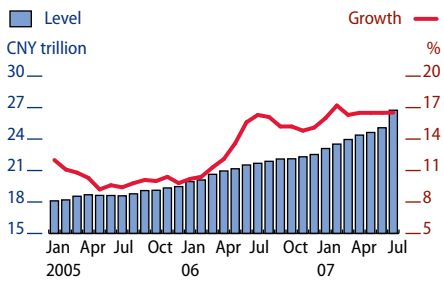
3.2.9 Bank lending



Source: National Bureau of Statistics, *China Monthly Economic Indicators*, various years.

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estate projects also frustrate efforts to limit investment growth. Measures to liberalize investment from the PRC in the Hong Kong, China stock market could help curb rises in foreign exchange reserves, and form a stepping stone to broader liberalization of capital account outflows.

The rapid economic growth and buoyant corporate profits helped boost fiscal revenue by 30.6% in the first half of 2007, when fiscal expenditure grew by 22.7%. The surge in receipts and a slowdown in public infrastructure spending should help keep the budget deficit this year to less than 1% of GDP. Reflecting changes in spending priorities, outlays on rural development, education, social security, and health care all rose by 28–36% during January–June. The Government announced in March that it is developing a plan for state-owned companies to pay dividends (instead of reinvesting profits, one reason for the rapid growth in investment).

Prospects

The faster than expected growth momentum built up this year is expected to carry into 2008. Further steps to cool the rapid investment expansion are likely and the Government will put more emphasis on improving energy efficiency and on cutting pollution. But top priorities remain the creation of jobs for nearly 8 million rural surplus workers migrating to cities each year, and on lifting income growth in lagging regions. Moreover, fiscal spending looks set to increase in 2008 with more public investment slated for education, health care, and rural development.

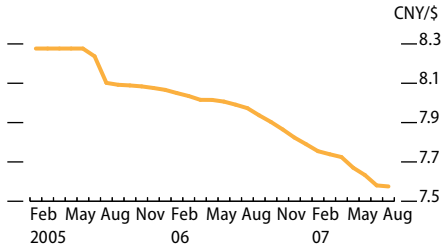
On the demand side, rising incomes and improvements to the social security system are projected to underpin growth in consumption. Investment will stay high, supported by local governments that want to generate employment and develop their cities, by banks willing to lend, and by enterprises eager to expand and maintain earnings growth. The gap between export and import growth will probably close a little as the changes to export tariffs and export tax rebates take effect.

GDP growth for 2008 is revised to 10.8% (Figure 3.2.13), up 1 percentage point from the *ADO 2007* forecast. The current account surplus is put at 10.5% of GDP (Figure 3.2.14), revised up because of a sustained high merchandise trade surplus and a narrower deficit in services trade. On the production side, agriculture should be strengthened by policies to lift rural incomes and to improve rural infrastructure, and services will be supported by the summer Olympics. But industry is again expected to contribute the lion's share (about two thirds) of GDP growth in 2008.

The sharp increases in food prices seen in 2007 are assumed to ease next year. This would open the way to carry out planned reforms in the pricing of state-controlled sectors such as water, power, and natural gas, which will probably mean tariff increases by these utilities. On this basis, the inflation forecast for 2008 is raised from 2.2% to 3.8% (Figure 3.2.15).

Significantly higher inflation than forecast would, however, pose a risk to the outlook. Adverse weather would lower domestic grain production, at a time that imported grain prices are high. Furthermore, the pig disease might not be brought under control as quickly as the forecast assumes. Finally, the increases in the consumer charges from changes

3.2.10 Monthly yuan-dollar exchange rate



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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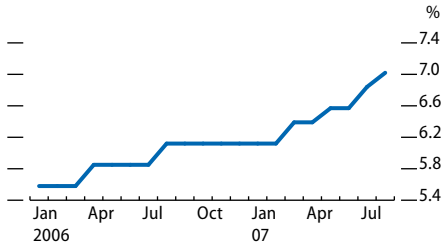
3.2.11 Benchmark lending rate (1 year)



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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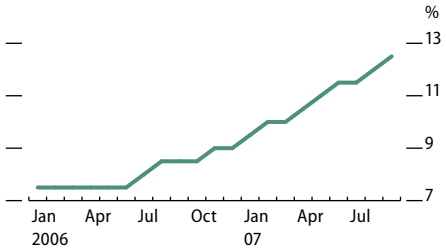
3.2.12 Bank reserve-requirement ratio



Source: People's Bank of China, available: http://www.pbc.gov.cn/english/, downloaded 31 August 2007.

Click here for figure data

3.2.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	10.0	11.2	9.8	10.8
Inflation	1.8	4.2	2.2	3.8
Current acct. bal. (share of GDP)	8.8	10.9	8.9	10.5

Source: Staff estimates.

to utilities' tariffs could turn out to be larger than currently expected, although these effects would likely be temporary and price liberalization would bring lasting benefits to the economy.

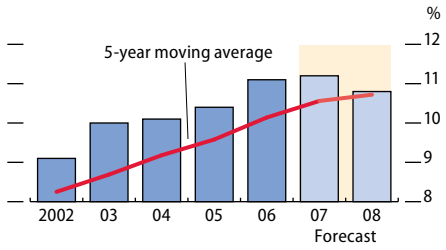
Another risk comes from the booming stock market. A major downturn in stock prices would likely damage bank balance sheets if borrowers faced major losses in stocks and could not service their bank loans. No official data are available on exposure, but it seems that some bank loans to households and enterprises have been used to speculate in stocks. Banks faced with rising nonperforming loan ratios would likely tighten lending, with impacts on the broader economy. A drop in stock prices that reduced household wealth would crimp private consumption, at least in urban areas, given the wider spread of stock ownership in recent years (more than 30 million new stock-trading accounts were opened in January–July 2007 alone).

The authorities face the important challenge of making progress with the plan to rebalance the economy, by reducing its reliance on exports and on investment for growth in favor of private consumption. Such a switch could lessen vulnerability to external shocks and ease environmental strains caused by the emphasis on export- and investment-led heavy industry. Yet policy measures taken over the past few years in this direction have so far achieved only modest rebalancing. Indeed, growth in the trade surplus and in investment outpaced growth in retail sales in the first half of 2007.

From a structural perspective, it seems that any substantial change in the current growth pattern is unlikely as long as the savings rate remains so high. Further, several studies of the country's flow-of-funds tables show that the increase in the national savings rate between 1992 and 2003 came mainly from rising government and enterprise saving; household saving, in contrast, fell by 3% as a share of total disposable income in those years. This drop occurred mainly because the household share of national disposable income declined during the same period, from 69% to 63%, while the government and enterprise shares rose, respectively, from 19% to 22% and from 12% to 15%. Available data since 2003 suggest that this trend has continued. Household incomes have grown in the past decade, but not as fast as enterprise profits and government revenues.

Therefore, lifting the share of total income going to households appears to be needed to achieve the economic rebalancing. Options to stimulate incomes include strengthening the implementation of minimum wages, further improvements to the social safety net, increasing public spending in education and health, and developing the capital market and the banking system to provide more avenues for consumer finance.

3.2.13 GDP growth



Sources: National Bureau of Statistics; staff estimates.

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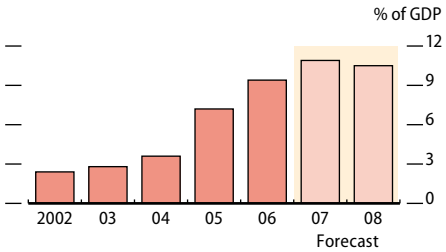
3.2.14 Current account balance



Sources: National Bureau of Statistics; staff estimates.

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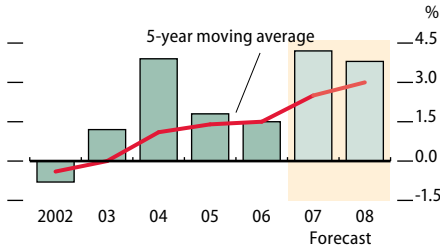
3.2.15 Inflation



Sources: National Bureau of Statistics; staff estimates.

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India

Asian Development Outlook 2007 (ADO 2007), published in March this year, noted concerns about the economy overheating, but forecast a soft landing piloted by higher interest rates, exchange rate appreciation, agricultural expansion, and measures to tame the real estate boom. Since then, the rupee has appreciated substantially, interest rates have risen further, the spring harvest was healthy, and the property boom is approaching maturation. So—has a soft landing been achieved?

This *Update* concludes that the economy is on a proper glide path. However, a firm hand on the joystick is needed and this was seen in the tightening of monetary policy at end-July. While overall inflation has moderated, food price inflation remains high, monetary expansion is well above the policy target, and overall demand momentum is staying strong. Still, with continued policy vigilance, the *Update* projects growth tempering to 8.5%, inflation being kept in check, and the current account deficit remaining easily manageable.

Updated assessment

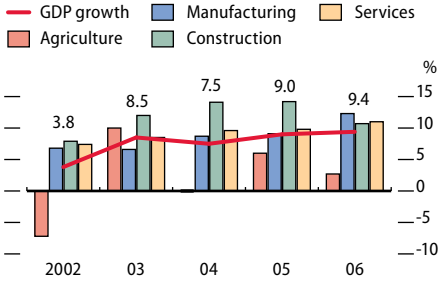
For 4 successive years, GDP has expanded rapidly, placing India among the world's fastest-growing and most vibrant economies. Revised estimates indicate that GDP expanded by 9.4% in FY2006 (ended March 2007)—the highest rate in the last 18 years (Figure 3.3.1). During the fiscal year, manufacturing, up by 12.3%, came into prominence as a source of growth, exceeding the 11% rise in services, the traditional mainstay. GDP from agriculture, which is volatile year to year according to the monsoon, grew by 2.7%.

The economy continued its momentum in the first quarter of FY2007 (April–June 2007) with GDP rising by 9.3%, only slightly lower than the 9.6% quarterly expansion a year earlier (Figure 3.3.2). Sector-wise, the pattern of growth also showed little change: agricultural growth picked up to 3.8%, while expansion in services moderated slightly. The authorities expect growth to ease further to the range of 8.5–9.0% for FY2007 as a result of monetary policies to prevent overheating and to keep inflation in check.

The economy is essentially driven by domestic demand and, unlike many other Asian countries, net exports generally have a small negative impact on growth. Buoyed by a combination of rising corporate profitability, robust credit from banks, and growing business confidence, fixed investment has expanded much faster than consumption in recent years, helping move the economy to its new high-growth path. Notably, the fixed investment-to-GDP ratio has climbed by nearly 6 percentage points over the last 4 years to 29.5% in FY2006, and accounted for over 40% of growth that year. In the first 3 months of FY2007, fixed investment continued to strengthen, to 31.3% of GDP.

The rapid transformation of the economy was especially evident in

3.3.1 Annual GDP growth by sector



Source: Central Statistical Organisation, available: http://mospi.nic.in, downloaded 3 September 2007.

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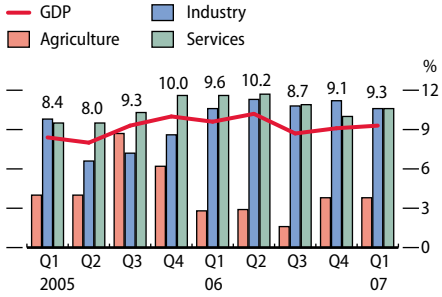
3.3.2 Quarterly GDP growth by sector



Source: Central Statistical Organisation, available: http://mospi.nic.in, downloaded 3 September 2007.

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FY2006. Domestic companies, traditionally "home biased," quadrupled their direct investment abroad to $11 billion as they sought new markets and technology. At the same time, (inward) foreign direct investment (FDI) expanded by 150% to $19.4 billion as global companies worked to establish or expand their presence in the country. Corporate profitability has grown by 30% annually in the 4 years through March 2007, while the Bombay Stock Exchange Index (SENSEX) has posted average gains of 44%. Nevertheless, a large section of the population has experienced little direct benefit from this high-growth era and a major challenge for policy makers is to find ways to further expand on the market-oriented reforms that have created this dynamism, while maintaining broad-based public support.

Above-trend growth has led to demand management pressures as the near elimination of excess capacity in manufacturing added to pressures on prices caused both by escalating and volatile international oil and food prices, and by wide variations in agricultural production. The Reserve Bank of India (RBI) has adapted its monetary policy to new developments aimed at maintaining price stability, while ensuring a credit and interest rate environment supportive of exports and investment demand.

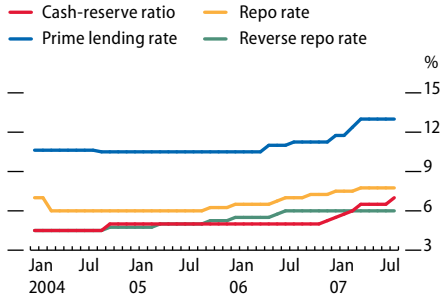
Figure 3.3.3 shows the series of tightening moves in policy rates that RBI has made in recent years to contain excessive demand pressures. In FY2006, it raised its repo rate (the rate at which banks borrow reserves from RBI) by 125 basis points to 7.75% and pushed up banks' cash-reserve ratio by 100 basis points to 6.0%. In response, banks' minimum prime lending rate increased by about 200 basis points over the year to 12.25%. Yet expansion in the money supply during the year still exceeded its target.

Monetary movements in the first 4 months of FY2007 show money supply growth remaining unabated at around 22% at end-July, well above RBI's target range of 17–17.5%, which was set for containing inflation below 5% (Figure 3.3.4). Moreover, growth in reserve money accelerated to 28.8%, driven by RBI foreign exchange purchases. These stemmed from a surge in capital account inflows that began in FY2006, and from a temporary drawdown in government net deposits. Marked excess bank liquidity resulted (i.e., reserve holding above requirements), causing the interbank money market rate to plummet to only 0.7% in July. (This situation of such excess bank liquidity, if sustained, would stoke excessive monetary expansion and high inflation.)

In response to these developments, RBI raised banks' cash-reserve ratio to 7.0% (on 4 August), adjusted regulations to damp borrowing from abroad by Indian companies (which had been feeding the marked rise in capital inflows), and ended a policy (adopted in March 2007) that limited the amount of its liquidity-absorbing reverse-repo transactions in its open-market operations. These actions appear to have brought call money market rates in August back into RBI's policy rate channel—a prerequisite for putting money supply growth on the intended track (Figure 3.3.5).

As measured by the wholesale price index, year-on-year inflation increased steadily from 4.1% at end-March 2006 to 6.7% in January 2007; remained stubbornly high through March; then moderated to 4.4% by July (Figure 3.3.6). The decline is attributed to three main elements: some easing of food prices on better supplies (though at nearly 10% food

3.3.3 Policy and prime lending rates



Source: Reserve Bank of India, *Annual Report*, various years, available: http://www.rbi.org.in, downloaded 3 September 2007.

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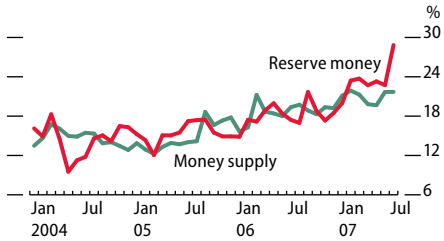
3.3.4 Monetary indicators



Source: CEIC Data Company Ltd., downloaded 28 August 2007.

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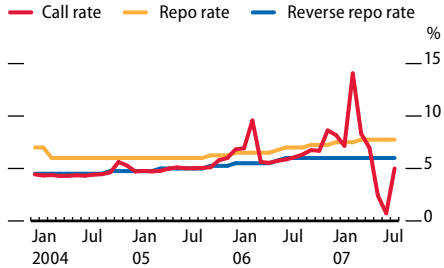
3.3.5 Policy rate channel



Source: Reserve Bank of India, *Annual Report*, various years, available: http://www.rbi.org.in, downloaded 3 September 2007.

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inflation remains high); an unusual negative impact on inflation by the fuel component as a result of reductions in the controlled retail prices of gasoline and diesel in February and March 2007 (crude costs had declined through January) that has now, in a base effect, put retail prices below year-earlier levels; and a reduction in manufactured goods inflation (to 4.9% in July), which carries a 64% weight in the index.

This last factor is a direct outcome of tightened monetary policy. The outlook for commodity prices reinforces the need for reining in those demand pressures that are most susceptible to tighter credit policies, namely consumer and real estate credit. Also, RBI has tightened risk weights and provisioning requirements as part of prudential policies to avoid excessive growth in consumer and real estate credit. Higher interest rates appear to have had little impact on business investment: a very buoyant longer-term outlook has apparently overridden a cyclical rise in borrowing costs.

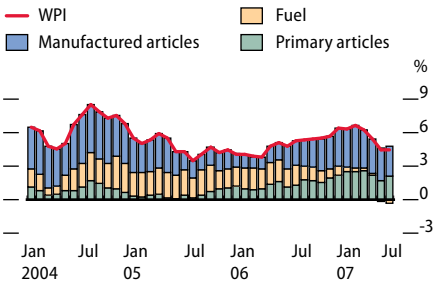
Volatility in international oil prices is a major concern. The average cost of the Indian crude basket, which reached a recent low of $52.62 per barrel in January 2007, rose to $72.70 per barrel in July 2007, resulting once more in a growing discrepancy between domestic and international price levels (Figure 3.3.7). Total "underrecoveries" (caused by the difference between the domestic selling prices and their ex-refinery costs) of the state-owned oil-marketing companies was Rs129 billion (about $1.6 billion or 1.2% of GDP) in the first quarter of FY2007 when crude costs averaged $66.50 per barrel. In FY2006, the Government issued bonds amounting to Rs241 billion related to losses of these companies. Growing financing costs, as a result of a higher crude oil bill, are likely to raise pressure on the Government to make some revision in domestic prices of gasoline, diesel, and cooking gas.

Balance-of-payments data for FY2006 show growth in exports of 20.9% and imports of 22.3%, and the trade deficit widening to $64.9 billion (Figure 3.3.8). This deficit was significantly offset by robust inflows from invisibles, which included earnings from services such as sales of software, call centers and other business services, and private transfers from Indians working abroad. The current account deficit rose marginally from a year earlier to $9.6 billion, staying at only 1.1% of GDP.

However, the capital account surplus, which has been on a rising trend (Figure 3.3.9), nearly doubled from a year earlier to $44.9 billion, driven largely by a surge (to $16.1 billion from only $2.7 billion) in commercial borrowing by Indian companies. With this jump in capital inflows, the overall balance-of-payments surplus escalated to $36.6 billion from $15.0 billion (including a relatively small errors and omissions item). This made managing monetary aggregates difficult. Much of the increase took place in the latter part of the fiscal year. The $19.4 billion in FDI inflows was counterbalanced by increased Indian investment abroad, yet net direct investment flows as a whole almost doubled to $8.4 billion. Net portfolio investment fell to $7.1 billion from $12.5 billion.

Customs data recorded robust growth in exports and imports during the first 4 months of FY2007 (April–July 2007). Exports increased by 18.2% year on year while imports (c.i.f.) posted a sharp rise of 30.7%, widening the trade deficit to $25.6 billion, or $9.8 billion higher than a year earlier. Although FY2007 balance-of-payments data are unavailable,

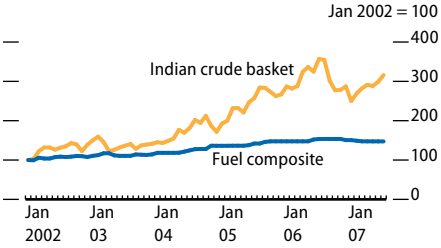
3.3.6 Contributions to wholesale price inflation



Source: Reserve Bank of India Database on Indian Economy, available: https://reservebank.org.in/cdbmsi/servlet/login/, downloaded 3 September 2007.

Click here for figure data

3.3.7 Oil and fuel price indexes



Notes: The Indian crude basket has been converted to rupees prior to indexing. The fuel composite is the weighted average of the wholesale price inflation for petrol, high speed diesel oil, LPG, and kerosene.

Sources: Reserve Bank of India Database on Indian Economy, available: https://reservebank.org.in/cdbmsi/servlet/login/; CEIC Data Company Ltd.; Indian Oil Corporation, available: http://www.iocl.com, all downloaded 28 August 2007.

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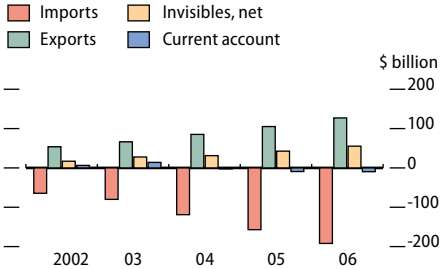
3.3.8 Current account indicators



Source: CEIC Data Company Ltd., downloaded 3 September 2007.

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developments in the trade balance and foreign exchange reserves indicate that capital inflows have remained high (Figure 3.3.10).

The exchange rate of the rupee against the US dollar showed two main movements in FY2006: an initial trend to depreciation through July, then appreciation to end-March 2007 at which time the rate was Rs43.60/$1, for a moderate strengthening of 2.3% over the year. The real effective exchange rate was essentially unchanged (Figure 3.3.11). In the first quarter of FY2007, reflecting continuing pressures from capital inflows and limited RBI intervention to fully offset market trends, the rupee-dollar rate appreciated quickly by about 7% to reach Rs40.8/$1 at end-June 2007, and held steady through August, while the real effective exchange rate appreciated by about 9% over the same period.

This abrupt change raised the alarm among a slew of important foreign exchange earners, from textiles and clothing companies, which operate on thin margins and confront stiff competition in international markets, to the information technology industry, which receives payment mainly in dollars and, in addition, faces rapidly escalating (rupee-denominated) wages for its staff.

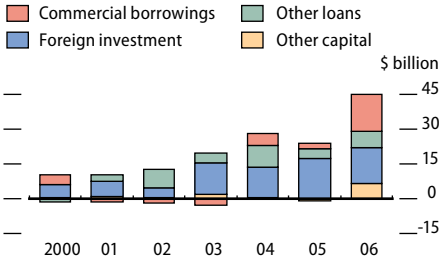
The present policy issues of sound monetary management and appreciation of the rupee illustrate the problems associated with the *impossible trinity*—the incompatibility of an open capital market, a fixed exchange rate, and an independent monetary policy. While India's capital account is not fully open—a longer-term goal to maximize economic efficiency recommended to the Government by an official study—it has been liberalized in recent years both with respect to inflows and outflows.

Even with a growing current account deficit, RBI has had to intervene to avoid sustained upward pressure on the exchange rate, which could have retarded development of the country's relatively small export base. RBI sterilized its foreign exchange intervention—i.e., offset expansion in reserve money and monetary expansion—by selling from its holding of government securities. By 2004, its holding had fallen significantly and had to be augmented by special issues of such securities solely for intervention under the Market Stabilization Scheme. The authorities also used increases in the cash-reserve ratio to neutralize growth in reserve money. Both efforts, however, pushed up domestic interest rates and encouraged further capital inflows.

The surge in commercial borrowing from abroad in FY2007, as well as the weight of growing interest costs for stabilization, induced the authorities to let the rate strengthen in the market. The revised limits on commercial borrowing from abroad (effective August 2007) will likely take the immediate pressure off the exchange rate and help RBI put monetary policy on a better footing. Underlying economic fundamentals, however, determine the real exchange rate, and market-oriented reforms of recent years have sparked productivity gains that will likely continue. This will make for further tension in managing monetary and exchange rate policies. The authorities will have to continue making fine judgments on policy, since capital flows are fickle and businesses tend to be wary of developments that force them into a tighter operating environment.

The stock market continues to please those who have invested, as indicated in Figure 3.3.12. The market quickly recovered from a correction in February–March 2007 associated with a bout of global jitters over risk

3.3.9 Capital account



Source: CEIC Data Company Ltd., downloaded 28 August 2007.

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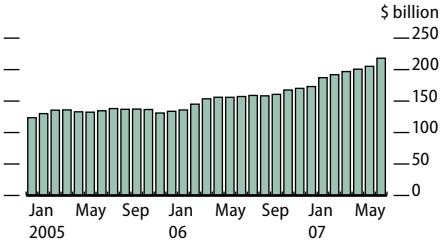
3.3.10 Foreign exchange reserves



Source: CEIC Data Company Ltd., downloaded 3 September 2007.

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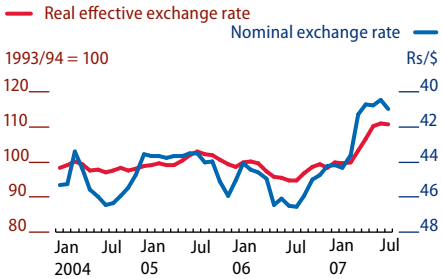
3.3.11 Exchange rates

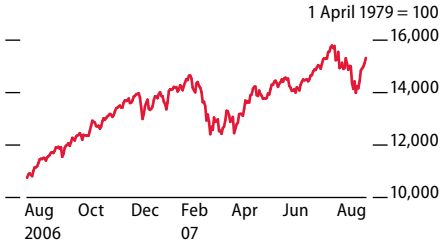


Sources: Reserve Bank of India Database on Indian Economy, available: https://reservebank.org.in/cdbmsi/servlet/login/, downloaded 21 August 2007; staff estimates.

Click here for figure data

(which affected markets in most industrial and developing countries) and then advanced markedly through mid-July, at which point turmoil in global credit markets sparked another slide. Since mid-August, most of the lost ground has been retraced, with the SENSEX posting a 30.9% advance for the year through end-August. (Foreign institutional investors are limited to an aggregate investment of $5 billion annually.)

3.3.12 Sensex movements



Source: Reserve Bank of India Database on Indian Economy, available: https://reservebank.org.in/cdbmsi/servlet/login/, downloaded 31 August 2007.

Click here for figure data

Prospects

The *ADO 2007* forecasts for FY2007 and FY2008 were based on five assumptions. This *Update* keeps four of the five: continued fiscal discipline, further tightening of monetary conditions, still-moderate agricultural growth, and a modest appreciation of the real effective exchange rate. However, the assumption of no revision in prices of gasoline, diesel, kerosene, and cooking gas looks less tenable because of increased crude oil prices. The timing of any price revisions of petroleum products, however, will depend to a large extent on the stability of food prices.

ADO 2007 expected that restraints on demand growth from homebuyers, manufacturing investors, and consumers would moderate the growth rate to 8.0% in FY2007. Developments to date suggest an upward revision to the growth forecast for the year, and a marginal upward revision for FY2008. Widespread capacity constraints, robust corporate profits, and the ongoing expansion of capital goods production imply that hardening interest rates are unlikely to dent investment, which will continue as a main driver of growth. Interest rate rises, however, will encourage consumers to put off spending, leading to a reduction in demand for consumer durables, and will damp the pace of construction activities as well.

3.3.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	8.0	8.5	8.3	8.5
Inflation [a]	5.0	5.0	5.0	5.0
Current acct. bal. (share of GDP)	-2.2	-1.6	-2.2	-1.9

[a] Wholesale price basis.

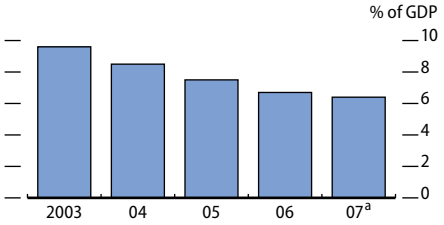
Source: Staff estimates.

Industrial production in July grew by only 7.1% from a year earlier, due to stagnation in durable goods manufacturing (though other sectors remained strong). For the first 4 months of FY2007 (April–July) it averaged 9.6%, and is now, riding on robust investment and capital goods production, expected to accelerate to around 10.5% in FY2007, pushing up GDP growth by a half percentage point to 8.5%. The forecast for FY2008 is revised marginally upward to 8.5%.

The general government deficit has been on a declining trend in recent years (Figure 3.3.13). Fiscal responsibility legislation adopted by the federal Government in mid-2004, and subsequently by most state governments, calls for an improvement in the overall deficit to at least 3% of GDP by FY2008. The federal government budget for FY2007 plans for the overall deficit to fall (by 0.4% of GDP) to 3.3% of GDP. Buoyant tax revenues in the first quarter of the fiscal year suggest that the deficit target should be met, as key fiscal indications showed improvement relative to prior-year levels (though the pay recommendations, due in 2008, of the Sixth Pay Commission for government employees could affect the ability of the federal and state governments to maintain the pace of fiscal consolidation).

Rising food prices were one of the causes of recent inflation. Conditions for agriculture are conducive for good growth in FY2007. Rainfall is predicted to be near normal. To enhance the supply of pulses,

3.3.13 Consolidated fiscal deficit



[a] Revised government estimate.

Source: Reserve Bank of India, *Annual Report 2006–07*, available: http://www.rbi.org.in, downloaded 3 September 2007.

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the federal Government has decided to import 1.5 million tonnes of them. Domestic wheat procurement by government agencies during April–May 2007 was higher than the same period 12 months earlier. The Government has also decided to import 0.5 million tonnes of wheat to augment its buffer stock. With a positive outlook for domestic food supplies and tightened monetary policies, the inflation forecast (wholesale price index) is unchanged from *ADO 2007* at 5.0% for FY2007 and FY2008 (despite some upward adjustment in domestic fuel prices). Inflation risks persist though, and any shock to food prices, and any larger revision in domestic prices of petroleum products (which is needed), are causes for special concern.

The current account deficit was substantially lower in FY2006 than was expected when *ADO 2007* was prepared. This is primarily attributed to much lower growth in imports (22.3%) as against 26% assumed in *ADO 2007*. It is expected that imports will grow faster than forecast in *ADO 2007* due to hardening international oil prices, but from a lower base. Accordingly, the current account forecast for FY2007 reflects a smaller deficit of $18.2 billion in FY2007, or 1.6% of GDP, down from *ADO 2007's* 2.2% deficit. Similarly, a current account deficit of $24.5 billion, or 1.9% of GDP, is now forecast for FY2008 (with both ratios taking account of the higher nominal GDP).

The key risks to the above outlook emerge from shocks that would undermine fiscal or monetary discipline or radically affect food or fuel prices. Marked further appreciation of the rupee would likely have an adverse impact on exports and corporate profitability in export-oriented sectors. Finally, the recent disturbances in global financial markets might snowball into a global credit crunch, with obvious adverse macroeconomic implications for India.

Indonesia

First-half private consumption and investment showed greater strength than expected in *Asian Development Outlook 2007* (*ADO 2007*), and this is likely to be maintained in the second half, leading to an upward revision in the full-year GDP growth forecast to 6.2%. Net exports are also contributing to aggregate growth. The inflation forecast for 2007 is nudged up to 6.3%. In 2008, GDP growth is projected to edge higher, driven mainly by domestic demand. The Government has addressed several impediments to investment, but further reforms, and implementation of those already approved, are necessary.

Updated assessment

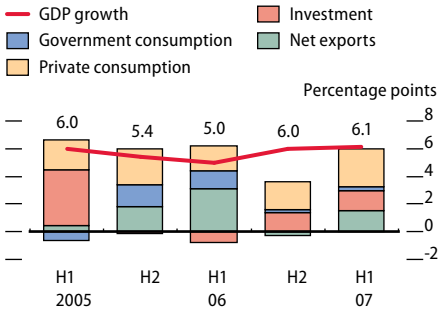
GDP growth accelerated to 6.3% in the second quarter of 2007 from 6.0% in the first, putting first-half expansion at 6.1%. The main drivers of growth were private consumption (Figure 3.4.1), a recovery in private investment, and a solid expansion of net exports. Growth in fixed capital investment increased to 7.3% in the January–June period, the strongest rate in this key indicator for 2 years (Figure 3.4.2). In 2006, investment sentiment had been hurt by high inflation that resulted from a sharp lift in administered fuel prices in late 2005, and a subsequent hike in interest rates. According to data from the state investment agency, actual foreign direct investment (FDI) nearly doubled to $7.3 billion during the first 7 months of 2007 relative to the year-earlier period (the data exclude FDI in oil, natural gas, and banking). Indicators for construction-related investment, such as demand for cement and steel, suggest a recovery in this area, too. A pickup in investment credit also is evident.

Lower inflation and interest rates have helped push up consumer spending, with private consumption increasing by 4.7% in the first half, up by 1.3 percentage points from the second half of 2006. Consumption indicators such as retail sales have picked up during 2007. On the supply side, services again made the biggest contribution to aggregate GDP growth. Industry also expanded, but agricultural output was little changed.

Overall, private consumption and investment are stronger than was anticipated in *ADO 2007*, and the full-year GDP growth forecast is revised up to 6.2% from 6.0%.

Inflation slowed to average 6.2% in the first 6 months of 2007, within this year's 5–7% target range set by Bank Indonesia, the central bank. Year-on-year inflation stepped down from 6.6% at end-2006 to 5.8% in June 2007, then quickened to 6.5% in August (Figure 3.4.3). The initial drop was mainly a result of moderating food prices, reflecting both a government decision to resume rice imports in response to drought in early 2007, and the start of a delayed rice harvest. The recent increase was attributed to a combination of pressures: higher food prices when the harvest ended, other seasonal factors, and a depreciating rupiah. The stronger domestic demand and higher food prices have led to a marginal upward revision in the 2007 inflation forecast to 6.3% from 6.2% in *ADO 2007*.

3.4.1 Contributions to growth (demand)



Note: Excluding statistical discrepancy.

Source: CEIC Data Company Ltd., downloaded 16 August 2007.

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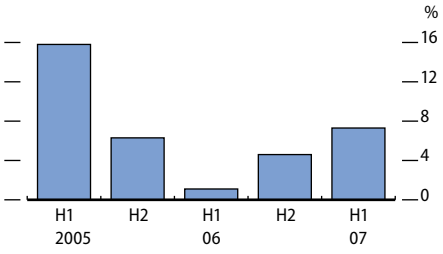
3.4.2 Fixed capital investment growth



Source: CEIC Data Company Ltd., downloaded 16 August 2007.

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Fiscal policy in 2007 has focused on accelerating development spending, while reducing public debt. Cuts in fuel subsidies 2 years ago and increased revenues from more effective tax administration have permitted higher development outlays. Government forecasts for the budget deficit put it at 1.6% of GDP in 2007, compared with an original target of 1.1%. This variance is due to greater than expected spending (particularly on disaster management, infrastructure, electricity subsidies, and fiscal transfers to regions) and lower revenues (following a shortfall in oil and gas income caused by lower production, and lower privatization receipts relative to budgeted levels).

Higher volumes of concessional borrowings from development banks will provide most of the additional financing for the deficit. The wider fiscal gap is still consistent with a further reduction in the ratio of total central government debt to GDP to around 36% at end-2007, from 39% at end-2006.

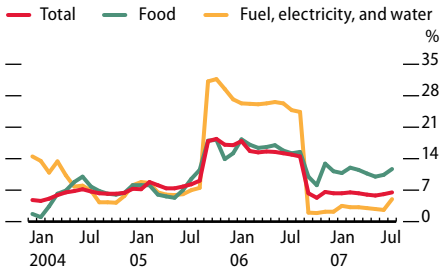
Preliminary trade data for the first 6 months of 2007 show that merchandise exports increased by 14.5% to $53.7 billion (Figure 3.4.4). Exports of manufactures and minerals rose by 18.9% and 35.4%, respectively, although sales of oil and gas to overseas markets fell by 7.0% due to lower production. Imports increased 1.7 percentage points faster than exports, by 16.2% to $33.6 billion, on strong growth in demand for imported consumption goods, raw materials, and (to a lesser extent) intermediate goods, refined oil products, and capital goods. Despite this faster import growth, the trade surplus rose to $20.0 billion from $18.0 billion a year earlier, as a consequence of a higher export base.

Even though a surplus on the transfers account was bolstered by growing remittances from migrant workers, the trade surplus was offset to some extent by widening deficits in the services and income accounts. This reflected primarily a rise in imports of construction and financial services, and the repatriation of profits and dividends by foreign companies operating in Indonesia. The upshot is that the current account surplus is estimated to have moderated during the first 6 months of 2007 from the corresponding period of 2006. However, due to continued strong inflows of both foreign portfolio capital and FDI, the overall balance of payments for the first half is estimated at a surplus of $3.7 billion. This helped lift international reserves to $51.9 billion at end-July 2007, from $42.6 billion at end-2006 (Figure 3.4.5).

These broad patterns are expected to continue for the rest of the year, and the surplus in the current account is now projected to decline to 1.4% of GDP in 2007 from 2.7% in 2006. This still represents an increase over the *ADO 2007* forecast (of 1.0%), due to the higher than expected growth in exports. External reserves, fueled by a likely rise in FDI in the second half of 2007, are seen increasing further to about $55 billion at the end of the year, providing 7.7 months of import cover. Total external debt is projected to decline to about 31% of GDP at end-2007 from 37% the previous year, reflecting net repayments of loans by banks and companies.

Slowing inflation enabled Bank Indonesia to lower its policy interest rate by 450 basis points to 8.25% between early May 2006 and late July 2007. The flow-on to lower commercial bank lending rates contributed to a recovery in credit, which rose by 20.4% in June 2007 from a year earlier. Credit to business is now growing at a faster rate than credit to

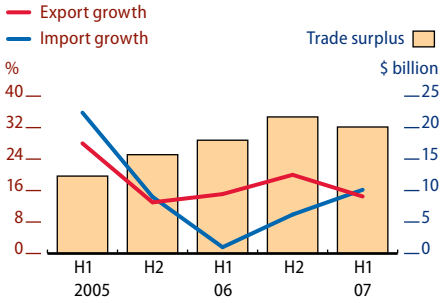
3.4.3 Monthly inflation



Source: CEIC Data Company Ltd., downloaded 7 September 2007.

Click here for figure data

3.4.4 Trade indicators



Sources: Badan Pusat Statistik, available: http://www.bps.go.id; CEIC Data Company Ltd.; both downloaded 7 September 2007.

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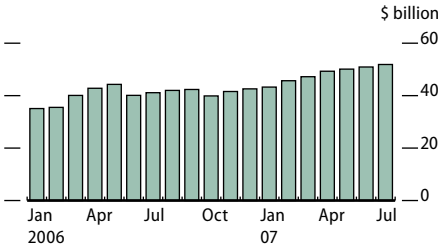
3.4.5 Gross international reserves



Source: Bank Indonesia, available: http://www.bi.go.id/web/en, downloaded 31 August 2007.

Click here for figure data

consumers, reversing a trend seen in recent years (Figure 3.4.6). Slightly faster growth in credit than deposits raised the loan-to-deposit ratio to 65.8% in April 2007, the highest level in 6 years. With commercial banks' loan rates declining at a more gradual pace than deposit rates, their profitability has improved.

A range of factors, including improved macroeconomic fundamentals, relatively high interest rates on debt securities and deposits, and expectation of currency appreciation attracted significant foreign portfolio inflows and helped propel the Jakarta Composite Index of share prices up by 30% in the first 7 months of this year (Figure 3.4.7). The portfolio inflows, in turn, helped support the rupiah. However, the reassessment in financial markets of global risks early in the second half prompted a weakening of the rupiah, and by end-August the currency had depreciated by 4.1% from the start of 2007 (Figure 3.4.8). The stock market index fell from its July peak, but at end-August was still up by 21.5% from the beginning of the year.

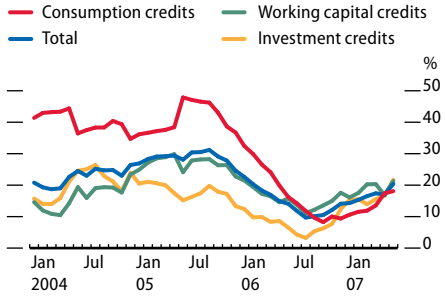
Recent data suggest that the pickup in economic growth has helped lower the poverty incidence to around 16.7% in March this year from 17.8% in March 2006. These levels of poverty, however, translate to almost 40 million poor people and remain far from the Millennium Development Goal target of 7.6% by 2015, and the Government's own target of 8.2% by 2009. Deeper structural reforms and pushing through with already-approved changes are necessary to make significant inroads into poverty and unemployment.

Indeed, some progress has been made over the past 2 years in reallocating fiscal expenditures toward programs that favor the poor and away from inefficient fuel subsidies. But Indonesia is still underspending in key sectors, including infrastructure, where the level of spending has fallen from a high of around 6% of GDP before the Asian financial crisis in 1997–98 to 2–3% of GDP recently. (Spending on infrastructure in Viet Nam, for example, in 2006 exceeded 9% of GDP.)

In surveys, businesses continue to identify this lack of investment in infrastructure—along with a weak legal system, labor-market rigidities, excessive bureaucracy, and corruption—as major impediments to business activity and investment. But reforms are slowly being made. Parliament finally passed a new investment law in March 2007, having earlier prevaricated. Among other changes, the law provides for equal treatment of local and foreign investors and for the resolution of contract disputes between the Government and investors (a major source of disputes in the past) through international arbitration. As part of the implementing regulations of the new law, the authorities have clarified which business sectors are open to foreign investors.

Steps in the appropriate direction include an investment climate policy package (adopted in February 2006), which includes proposals to reduce the time required to set up a company, and measures to boost smaller enterprises (adopted June 2007), which aim to improve access to finance. But against these potentially useful measures, labor unions have blocked amendments to the Labor Law intended to increase flexibility of labor regulations. Businesses criticize the current law for, among other things, mandating layoff payments that are much higher than in comparable countries, and limiting the ability of employers to outsource work.

3.4.6 Growth of commercial banks' loans



Source: Bank Indonesia, available: http://www.bi.go.id/web/en, downloaded 31 August 2007.

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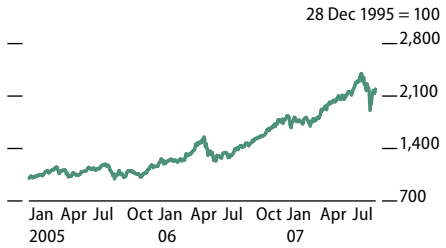
3.4.7 Jakarta Composite Index



Source: CEIC Data Company Ltd., downloaded 7 September 2007.

Click here for figure data

3.4.8 Rupiah against the US dollar

Note: An index below 100 signifies a depreciation of the rupiah.

Source: Bank Indonesia, available: http://www.bi.go.id/web/en, downloaded 31 August 2007.

Click here for figure data

Companies see these requirements as stifling employment generation, particularly in labor-intensive sectors such as textiles and footwear.

Prospects

Growth in 2008 is likely to be driven by domestic demand. The reductions in domestic interest rates since May 2006 and an improving investment climate are set to push investment growth next year, while a recovery in consumer confidence will lead to an acceleration in private consumption expenditure. GDP growth will be supported by higher rates of credit expansion to the private sector as bank and corporate balance sheets strengthen. Moreover, government infrastructure outlays are expected to increase.

These positive developments are likely to be partly offset by a smaller surplus in net exports as imports rise in response to stronger investment and consumption demand, and as exports moderate in line with a projected decline in global nonfuel commodity prices. Overall, GDP growth in 2008 is forecast to edge up to 6.4% (Figure 3.4.9), a marginal upward revision from that in *ADO 2007*.

The 2008 budget predicts a wider deficit of 1.7% of GDP, reflecting a near 50% increase in capital spending from the revised 2007 budget; a 16.2% reduction in state spending on consumption; and increased allocations for education and health, and for transfers to the regions. The authorities aim to meet the additional financing needs through the issuance of government securities, the recovery of state bank assets as part of banks' restructuring efforts, increased privatization receipts, and external loans. But even with these higher budget financing requirements, the central Government's total debt-to-GDP ratio is projected to decline further to around 33% in 2008 from 36% this year.

On the external side, the current account surplus is projected to fall to 0.7% of GDP in 2008 (the same as forecast in *ADO 2007*; Figure 3.4.10), as export growth eases while stronger domestic investment and consumption demand lifts imports. In addition to a smaller trade surplus, wider deficits are likely in the services and income accounts. However, the overall external balance will remain in surplus owing to growth in FDI and portfolio investment flows, which will contribute to the further accumulation of foreign exchange reserves. Total international reserves should be about $62 billion at the end of next year, or 7.4 months of import cover.

Food prices are expected to be more stable than this year (assuming normal weather and food production) paving the way for inflation to ease to an average 6.0% in 2008, against 6.1% forecast in *ADO 2007*.

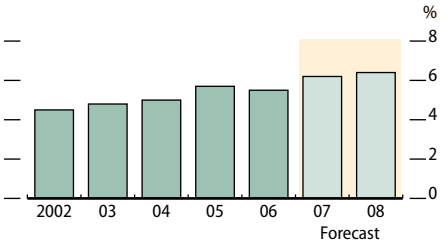
Domestic risks to this outlook are headed by inadequate effective action on structural reforms, insufficient investment in infrastructure (which could lead to supply bottlenecks), and regional governments' inability to implement projects. Despite budgeted increases in national public infrastructure expenditure in 2008, actual disbursement might come in below target. In the regions, too, despite their now larger role in spending, earlier this year they were holding cash deposits equal to an estimated 2.5% of GDP, reflecting their weak capacity to carry out projects (thereby hindering GDP growth).

3.4.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	6.0	6.2	6.3	6.4
Inflation	6.2	6.3	6.1	6.0
Current acct. bal. (share of GDP)	1.0	1.4	0.7	0.7

Source: Staff estimates.

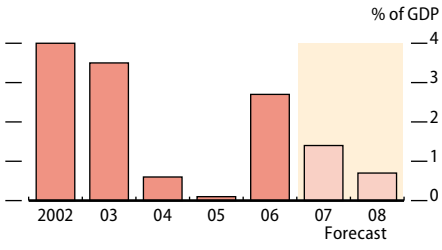
3.4.9 GDP growth



Sources: CEIC Data Company Ltd., downloaded 16 August 2007; staff estimates.

Click here for figure data

3.4.10 Current account surplus



Sources: CEIC Data Company Ltd., downloaded 16 August 2007; staff estimates.

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Malaysia

Consumption spending, bolstered by rising incomes, led economic expansion in the first half of 2007, with fixed investment making a robust contribution. Public investment under the Ninth Malaysia Plan is supporting growth, but weaker global demand for electrical and electronic products hurt exports. The projection for GDP growth this year is revised up slightly to 5.6% and kept at near this level for 2008. Inflation has slowed and is projected to stay low.

Updated assessment

Led by domestic demand, the economy expanded by 5.6% in the first half of 2007. Private consumption accelerated at its fastest pace (10.8%) for several years (Figure 3.5.1), accounting for nearly all the expansion in GDP (Figure 3.5.2). Supporting consumption were increases in incomes, stronger prices received for agricultural commodities, a healthy labor market, and stable interest rates. Government consumption also stepped up in the first half.

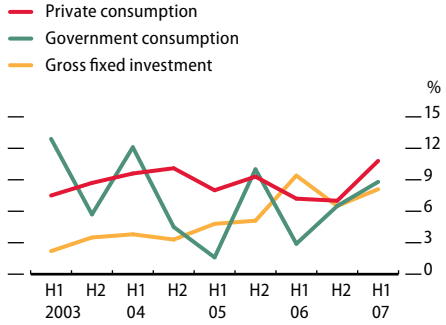
Fixed investment expansion was a robust 8.1%, close to the increased rate posted in 2006, the first year of the Ninth Malaysia Plan (2006–2010), which boosts investment on public infrastructure. Private sector fixed investment showed signs of picking up, with strong sales growth in construction-related materials and in loans to business. Net foreign direct investment (FDI) rose by 54.1% to $1.6 billion in the first 3 months of the year. Total fixed investment added 1.9 percentage points to GDP growth (though this was more than offset by a decline in inventories).

Real exports and imports grew by about 2.5% in the first half, much slower than in recent years, partly a reflection of weaker global demand for electrical goods (including electronic products), one of Malaysia's biggest export industries. Net exports added just 0.4 percentage points to GDP growth.

On the supply side, expansion in the services sector accelerated to nearly 10%, and contributed 4.5 percentage points to total growth in the first half of 2007 (Figure 3.5.3) This sector has grown much faster than industry over recent years as the economic structure has evolved toward a greater emphasis on services. Double-digit growth rates were recorded in three major subsectors: real estate and business services, finance and insurance, and wholesale and retail trade. Services benefited from strong consumption spending and an increase in tourism.

Industrial production, in contrast, grew at a slower rate in the first half (2.4%) than the year-earlier period, and contributed only 1.1 percentage points to GDP growth. Manufacturing slumped and barely stayed in positive territory, at 0.5%, reflecting weaker global demand for electrical products, where output contracted by 5.6% in the first half. Construction, in particular civil engineering, benefited from infrastructure spending under the Ninth Plan and development of oil and

3.5.1 Consumption and gross fixed investment growth



Source: Bank Negara Malaysia, available: http://www.bnm.gov.my, downloaded 30 August 2007.

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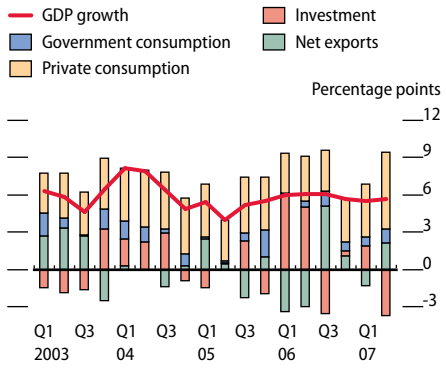
3.5.2 Contributions to growth (demand)



Sources: Bank Negara Malaysia, available: http://www.bnm.gov.my; CEIC Data Company Ltd.; both downloaded 30 August 2007.

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natural gas projects. It grew by 4.4%, after shrinking for 3 years in a row. Mining production also switched to a positive outturn, and was up by 3.5%, as oil and gas output picked up. Agriculture grew by just 0.6% in the first half as unfavorable weather reduced palm oil yields.

In the second half of 2007, private consumption will get further support from significant pay increases for about 1 million public sector employees. These came into effect in July, at an annual cost to the Government of more than $2 billion. Investment for the full year will remain underpinned by public infrastructure development. However, net exports will be a drag on aggregate growth. Taking these factors into account, the projection for full-year GDP growth in 2007 is revised up to 5.6% from 5.4% in *ADO 2007*.

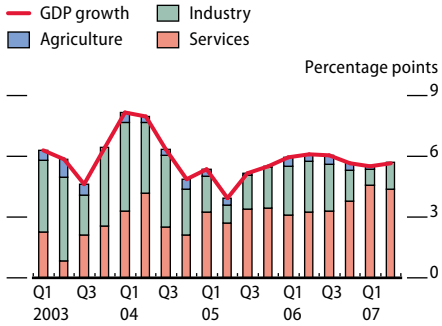
Total government expenditure increased by 25.4% in the first half of 2007 (year on year; Figure 3.5.4), with development spending up by more than double this rate as spending picked up under the Ninth Plan. Public spending is projected to accelerate in the second half of the year, when government outlays usually accelerate. The Government is aiming for a full-year fiscal deficit of 3.2% of GDP, narrower marginally from 3.3% in 2006. Based on an expected rise in petroleum-related revenue, the fiscal target could well be met. Over the longer term, though, reliance on such revenue (oil and gas receipts, including dividends from the national oil company, account for about 35% of total revenues) makes the fiscal position more susceptible to a decline in energy production or prices.

Inflation, at 2.0% on average in the first 7 months of 2007, decelerated from 3.8% in the year-earlier period (Figure 3.5.5). The impact of an 18–24% increase in retail fuel prices in March 2006 subsided, an appreciation of the ringgit helped curb imported price pressures, and the Government maintained price controls on food staples. Although inflation trended down, Bank Negara Malaysia, the central bank, kept its overnight policy interest rate at 3.5%, given buoyant domestic demand and a robust labor market.

Based on lower than expected inflation and the steady stance of monetary policy, the inflation projection for the full year is revised down to 2.5% from 2.7% in *ADO 2007*. Money supply (M2) expanded by 13.3% in January–July year on year, reflecting increases in net foreign assets held by the banking sector and a steady rise in international reserves. The ringgit, after appreciating by 7.0% against the US dollar in 2006, firmed by a further 2.2% by end-July, although it subsequently gave back much of 2007's appreciation, to be 0.8% firmer by end-August, after the global reassessment of risk caused a softening in many currencies. Foreign exchange administration policies were liberalized from April in a move aimed at facilitating development of the financial market and investment in ringgit assets. The changes included greater flexibility in ringgit overdraft facilities for nonresidents and higher limits for residents to invest in foreign currency assets.

The weakness in global demand for electrical goods, which make up about half Malaysia's total merchandise exports, induced a sharp pullback in growth of total merchandise exports to 7.7% in the first half (on a US dollar customs basis) from 13.8% in the year-earlier period. The value of electrical products shipped from Malaysia was virtually flat in US dollar terms in this period. In contrast, exports of agricultural products surged,

3.5.3 Contributions to growth (supply)



Sources: Bank Negara Malaysia, available: http://www.bnm.gov.my; CEIC Data Company Ltd.; both downloaded 30 August 2007.

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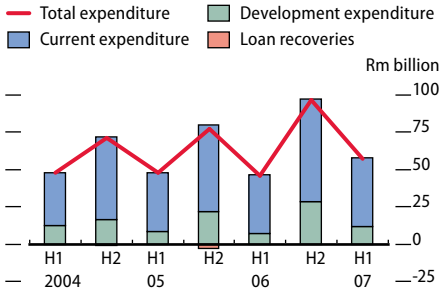
3.5.4 Government finance



Source: Bank Negara Malaysia, available: http://www.bnm.gov.my, downloaded 30 August 2007.

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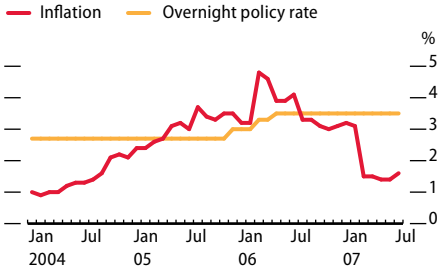
3.5.5 Inflation and overnight policy rate



Source: Bank Negara Malaysia, available: http://www.bnm.gov.my, downloaded 30 August 2007.

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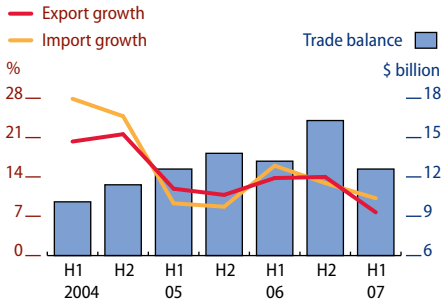
led by palm oil. Prices of this commodity climbed on strong global demand, reinforced by a rise in soybean oil prices as some US producers switched to planting corn for biofuel, and by the fact that India, a major buyer of edible oils, reduced its tariff on palm oil imports.

Merchandise imports rose by 10.2% in the first half in US dollar terms, also slowing from the first half of 2006. Imports of some consumption goods such as food, consumer durables, and medicines rose at a rapid rate, as did imports of intermediate goods. But imports of capital goods rose by just 3.4%. Faster growth in total imports than exports in the first 6 months lowered the trade surplus slightly to $12.6 billion (Figure 3.5.6). Data available for the first quarter show the current account surplus at $5.8 billion, down $2.0 billion from end-2006. For the full year, the current account surplus is projected to decline to a still-substantial 11.9% of GDP (changed from 10.7% in *ADO 2007* because of revisions to 2006 data). International reserves in the first 7 months of 2007 rose to $98.5 billion, equivalent to 8.9 months of retained imports and 8.7 times short-term external debt.

Employment rose by 305,000 in the first quarter from a year earlier, with services generating many of the jobs. This increase was well above that of the labor force (270,000). Consequently, the unemployment rate fell to 3.4% from 3.8% a year earlier, and is expected to decline further by year-end.

3.5.6 Trade indicators



Source: Bank Negara Malaysia, available: http://www.bnm.gov.my, downloaded 30 August 2007.

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Prospects

Robust domestic demand and a projected improvement in exports of electrical goods are expected to sustain the economy's momentum into 2008. Consumer spending will again be the main driver of growth, supported by increases in incomes. Public investment will remain strong as projects are rolled out under the Ninth Plan. These include the Iskandar Development Region, a large logistics and tourism project in southern peninsular Malaysia, and the Northern Corridor Economic Region, involving four states in the north of the peninsula.

Private sector investment is likely to be encouraged by planned cuts in the company income tax rate to 26% in 2008 and 25% in 2009 (the rate was lowered this year to 27% from 28%), by plans to exempt dividend income from tax, and by solid consumer demand expected next year. Regional development projects, such as Iskandar, will involve substantial private sector participation, too. To stimulate real estate development, the Government recently announced tax breaks for property owners and liberalized foreign ownership guidelines, which should have some impact next year.

Net exports are again likely to be a drag on performance, though GDP growth in 2008 is projected at 5.7%, about the average rate recorded over the previous 5 years (Figure 3.5.7) and unchanged from *ADO 2007*.

The Government budget announced in September 2007 puts economic expansion at 6.0–6.5% in 2008, compared with its projection of 6.0% in 2007. The budget projects that growth will accelerate from 2007 levels in agriculture, construction, manufacturing, and oil and gas; and slow only slightly in services from this year's fast pace.

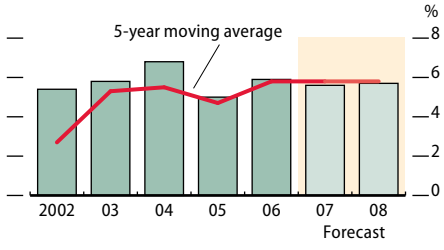
From the production side, manufacturing will gain from the projected

3.5.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	5.4	5.6	5.7	5.7
Inflation	2.7	2.5	2.7	2.5
Current acct. bal. (share of GDP)	10.7	11.9	10.2	11.6

Source: Staff estimates.

3.5.7 GDP growth



Sources: Bank Negara Malaysia, available: http://www.bnm.gov.my, downloaded 30 August 2007; staff estimates.

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increase in external demand for electrical products. Construction will continue to benefit from public sector development spending and the incentives for private-sector property development. In agriculture, production is projected to rise for food, natural rubber, and palm oil, encouraged by high prices. Oil and gas will be boosted by completion of maintenance work on oil fields and expansion of capacity.

To maintain development of services, the Government is targeting the financial subsector and tourism for growth. It is providing incentives for further expansion of Islamic financial services, including tax exemptions. Tourism also has strengthened rapidly and is receiving government investment and incentives. Tourist arrivals rose by nearly 25% to 10.7 million in the first half of 2007, spurred by promotion of events celebrating Malaysia's 50th anniversary of independence. Gross earnings from tourism will account for about 7% of GDP this year. The official goal is for 20.1 million tourist arrivals in 2007, rising to 21.5 million next year.

Exports should perform better in 2008 than this year, especially for electrical products, but the US economy, Malaysia's biggest export market, could still be hurt more than anticipated by the housing and financial market problems there. Palm oil and liquefied natural gas exports are seen expanding. Although growth in imports is likely again to outpace that of exports, the higher base of exports is projected to result in a larger merchandise trade surplus. Increased tourism earnings will be offset in the services account by higher payments for transportation and business services.

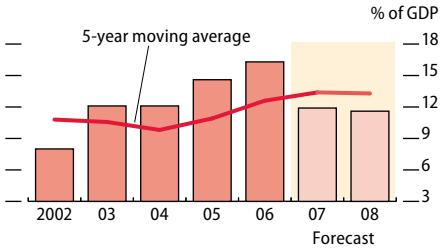
Taking these projections into account, plus likely net outflows in the income and transfers accounts, the current account surplus is forecast to decline as a share of GDP to 11.6% (Figure 3.5.8), revised from 10.2% in *ADO 2007*.

On the fiscal side, the Government is expected to maintain a generally expansionary policy, while gradually reining in the deficit (which has narrowed from 5.5% of GDP in 2000). Despite the impact on revenue of tax breaks announced this year, the authorities aim to limit the budget deficit to 3.1% in 2008.

Inflation next year is forecast to stay at around 2.5% (Figure 3.5.9), trimmed from the *ADO 2007*. This prediction would need to be raised if the Government further phased down fuel subsidies or implemented a goods and services tax (scheduled to start in January this year to replace the sales and services tax, but postponed).

The main risk to the above outlook is a significant slowdown of the US economy, which would hurt exports. The external account surplus would be smaller and GDP growth would be weaker in this scenario. Given that consumption is expected to be a driver, an acceleration in inflation could erode consumer spending and therefore GDP growth. The Ninth Plan targets 6% average annual GDP growth for 2006–2010, to be achieved in part by moving the economy up the value-added chain in manufacturing and services. The outcome could fall short of target if further gains are not made in building workforce skills and in enhancing the investment climate.

3.5.8 Current account balance



Sources: Bank Negara Malaysia, available: http://www.bnm.gov.my, downloaded 30 August 2007; staff estimates.

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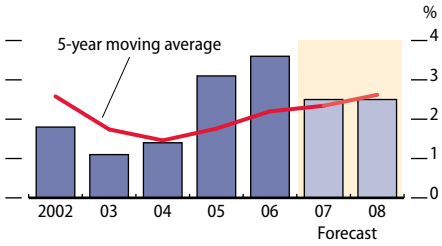
3.5.9 Inflation



Sources: Bank Negara Malaysia, available: http://www.bnm.gov.my, downloaded 30 August 2007; staff estimates.

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Pakistan

Robust and broad-based growth marked FY2007 (ended June 2007). Vigorous domestic demand was the catalyst, but it also induced inflation pressures. Monetary policy was tightened while fiscal policy remained expansionary, and a key challenge will be to align the two policies more closely. Encouraging revenue performance helped keep the fiscal deficit unchanged relative to GDP, although the trade and current account deficits widened, financed by strong external inflows. A concern is that these inflows could slow or reverse. The present momentum is expected to continue in FY2008, moderated by the impact of tight monetary policy conditions, high international oil prices, and slow export growth.

Updated assessment

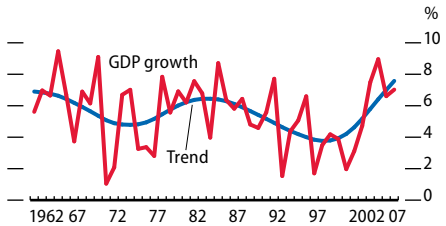
Underpinned by continued healthy domestic demand, the economy maintained its robust performance in FY2007, to achieve 7% growth (Figure 3.6.1). This outcome was broad based and supported by a solid recovery in agriculture (better availability of irrigation water), continued momentum in large-scale manufacturing, and sustained expansion of services. In recent years, growth from the demand side has been led by increased private consumption on rising per capita incomes, higher workers' remittances from abroad, and easier consumer credit (which, however, slowed sharply in FY2007 due to tighter monetary conditions).

In FY2007, private and government consumption contributed 45.4% of total output growth. For the first time in 4 years, total investment overtook private consumption as the largest contributor. This was the result of a strong expansion in real fixed investment of 20.6%, up from 17.6% in FY2006. As a share of GDP, total investment (including stocks) edged up from 21.8% to 23.0%. Several sectors, including manufacturing, construction, transport and communications, finance, and trade, witnessed high double-digit growth rates in private investment during the year.

On the production side, agriculture picked up in FY2007 (from stagnation in the previous year), posting 5.0% expansion. Large-scale manufacturing continued to grow briskly at 8.8%. However, as a result of unchanged raw cotton production and weakening export demand, the textile sector's performance was lackluster. Growth decelerated in the automobile sector too, as demand faltered, in part on the higher cost of consumer credit following a tightening of monetary policy. Rebuilding work in the regions that had been devastated by the October 2005 earthquake continued to boost a notable expansion in construction, just as greater private and foreign direct investment (FDI) did in the property sector.

Services, a major contributor to growth over the past 5 years, rose by 8.0%. Its momentum was spearheaded by the financial and telecommunications subsectors, both recipients of substantial amounts of

3.6.1 GDP growth



Note: Trend growth rates are calculated using a Hodrick-Prescott filter.

Source: Federal Bureau of Statistics, available: http://www.statpak.gov.pk, downloaded 21 August 2007.

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FDI. Investment inflows resulting from the issuance of global depository receipts (securities listed and traded in a foreign stock exchange), as well as a series of mergers and acquisitions, further supported financial sector momentum.

Inflation, after averaging 8.6% in the previous 2 years, declined only marginally in FY2007 to 7.8% from 7.9% (Figure 3.6.2). Despite heightened global oil prices toward the end of the fiscal year, the Government did not raise domestic oil prices in response (having made some downward price adjustments in gasoline and diesel, in March 2007).

A tighter monetary policy brought down nonfood inflation markedly to 6.0% (from 8.6% in FY2006), which led to a moderation in overall core inflation (nonfood, nonenergy) to 5.5%, from 7.1%. But food prices, which make up 40% of the consumer price index, rose sharply by 10.3%, reflecting a combination of global trends and domestic factors: dependency on imports of edible oil, whose price increased; and a shortfall in local production of chilies, pulses, and fresh vegetables.

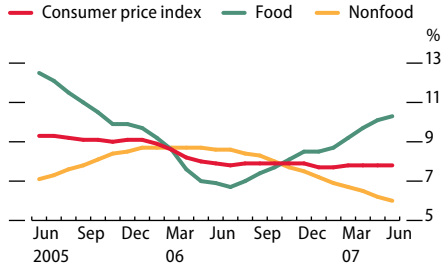
The State Bank of Pakistan (SBP), the central bank, tightened monetary policy for FY2007 to manage aggregate demand and so contain inflation pressures. In August 2006, it raised its discount rate (the main policy rate) from 9.0% to 9.5%; increased the statutory liquidity ratio from 15% to 18%; and raised the cash-reserve ratio for demand liabilities from 5% to 7%. However, the effectiveness of a tighter policy was confounded by unexpectedly large net capital account inflows which, despite a wider current account deficit, produced a very large overall balance-of-payments surplus.

Reflecting this higher surplus, net foreign assets of the banking system registered a sharp increase to PRs286 billion in FY2007. This boosted broad money supply (M2) growth to 19.3%, which overshot its 13.5% growth target. The sharp rise in SBP net foreign assets, plus much larger use of its special refinance facilities (for industry and exports) resulted in exceptionally high growth of 20.9% in reserve money, keeping liquidity conditions easy at banks.

With the high levels of net foreign exchange inflows, the central bank stepped up its purchases in the interbank market to maintain the currency steady against the US dollar at slightly above PRs60/$1 during the year. While it succeeded in avoiding nominal appreciation against the dollar, it incurred the cost of an increase in M2 and reserve money which, in turn, will most likely have a continuing inflation impact. (The decline in the US dollar against other currencies largely offset inflation differentials and the real effective exchange rate appreciated by marginally less than 1% in FY2007.) Open-market operations by SBP were sufficient to avoid a drop in bank lending rates, which changed little over the year. Private sector credit growth slowed to 16.9%, its lowest level in 3 years (Figure 3.6.3).

Fiscal policy remained expansionary. Actual total public expenditure in FY2007 at PRs1,675 billion was higher than planned and 19.5% greater than the previous year, while actual development spending rose to PRs433.7 billion (Figure 3.6.4). Borrowing from SBP was high for most of FY2007. An offshore $750 million bond issue in May 2007, however, helped the Government make a large repayment of its outstanding credit from the central bank at the end of the fiscal year. This masked SBP's

3.6.2 Inflation, 12-month moving average



Source: State Bank of Pakistan, available: http://www.sbp.org.pk, downloaded 31 August 2007.

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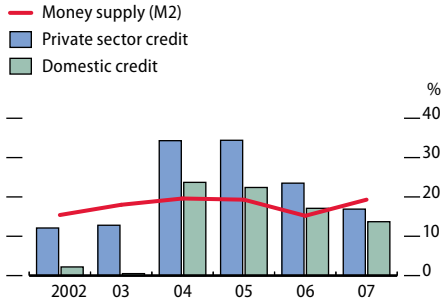
3.6.3 Growth of money and credit



Sources: Ministry of Finance, available: http://www.finance.gov.pk; State Bank of Pakistan, available: http://www.sbp.org.pk, both downloaded 8 September 2007.

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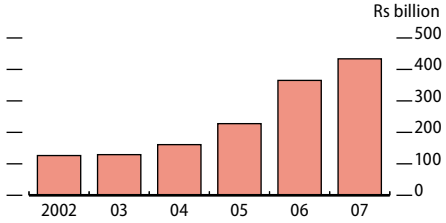
3.6.4 Development spending



Source: Ministry of Finance, *Economic Survey 2006-07*, available: http://www.finance.gov.pk, downloaded 31 August 2007.

Click here for figure data

intrayear problems in controlling reserve money to achieve its policy targets, and highlights the need for closer alignment between monetary and fiscal policies to manage aggregate demand more effectively.

Nonbank borrowings through the national savings schemes and long-term Pakistan investment bonds picked up sharply in FY2007. Greater reliance on these sources, rather than domestic bank borrowing or the issue of foreign bonds, would limit the adverse macroeconomic consequences of an expansionary budget policy that seeks to rapidly advance development spending.

Tax receipts remained buoyant, exceeding the target. On the back of improved revenue collection and administration reforms, direct taxes in particular registered impressive growth of 48%. Accordingly, the share of direct taxes in total tax collected by the Central Board of Revenue rose to 39.4% from 31.6% a year earlier. This performance kept the budget deficit to 4.3% of GDP (Figure 3.6.5).

Export growth decelerated to a disappointing 3.3%, from 14.9% in FY2006. One reason was slower growth in textile exports (which account for around 60% of total exports), which appears to stem from greater international competition in the postquota era. Another important factor was marked weakness in the performance of the other exports category. The ultimate causes of poor exports are grounded in long-term and deep structural issues relating to the lack of diversification of export industries, poor compliance with quality standards, and concentration of exports in a small number of markets.

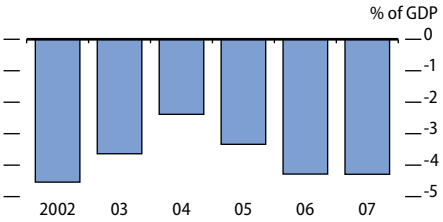
The growth of imports, too, in FY2007 saw a sharp deceleration, to 7.9%, from an average of 30% in the 3 previous fiscal years, reflecting the notable slowing in domestic consumption during the year: consumer and intermediate goods were virtually stagnant, (with large reductions in important items such as automobiles); oil imports moderated; but capital goods remained buoyant. Growth in oil imports also moderated. The trade deficit widened significantly in absolute levels but as a share of GDP was essentially static at 6.9%.

With a deterioration in the income account, the current account deficit (excluding official transfers) slumped to $7.5 billion (Figure 3.6.6). This represented a significant widening in dollar terms for the third year in a row, reaching 5.2% of GDP. Yet the deficit would have been even greater if workers' remittances had not increased by almost 20%, to $5.5 billion.

The financing of the current account deficit was again managed without difficulty, given that the financial account surplus amounted to an estimated $10.2 billion—a very large $4.3 billion advance relative to the previous year. However, the continuity of these flows is not ensured and thus raises questions about the deficit's sustainability. Nearly all the rise in the surplus came from non-debt-creating inflows that have financed the bulk of the large increases in the current account deficit of the past 3 years.

Total foreign private investment inflows nearly doubled to a record $8.4 billion from $4.5 billion a year earlier, including $5.1 billion in FDI (up from $3.5 billion; Box 3.6.1) and the balance of $3.3 billion in portfolio investment (up from $1.0 billion), mainly in equities. With a large $3.5 billion overall surplus, SBP foreign exchange reserves in FY2007

3.6.5 Budget balance



Source: Ministry of Finance, available: http://www.finance.gov.pk, downloaded 21 August 2007.

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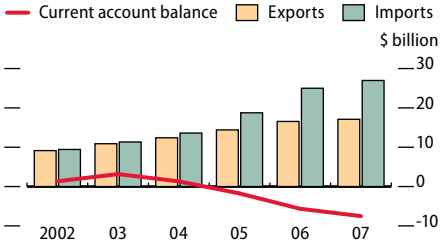
3.6.6 Current account indicators



Sources: Ministry of Finance, available: http://www.finance.gov.pk; State Bank of Pakistan, available: http://www.sbp.org.pk, both downloaded 31 August 2007.

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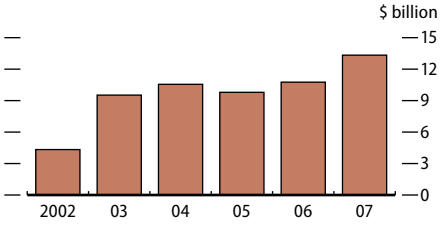
3.6.7 Foreign exchange reserves



Sources: Ministry of Finance, available: http://www.finance.gov.pk; State Bank of Pakistan, available: http://www.sbp.org.pk, both downloaded 31 August 2007.

Click here for figure data

3.6.1 Trends in foreign direct investment

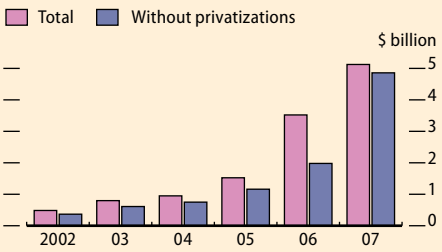
Foreign direct investment (FDI) has grown rapidly in recent years (Box figure). In FY2007, it reached an estimated $5.1 billion, for a year-on-year increase of 45.6%, and accounted for one half of the financial account surplus.

FDI flows have, however, been highly concentrated in four sectors: telecommunications, financial services, oil and gas, and tobacco and cigarettes. Together, these sectors accounted for three fourths of total FDI in the first 11 months of FY2007, with telecommunications on its own amounting to almost a third of total FDI. The largest investment in the telecoms sector in FY2007 came from the PRC, which amounted to about 16% of total FDI.

The financial sector was the second largest sector. Between July 2006 and May 2007, FDI amounted to $897 million, largely due to the consolidation in banking, which resulted in several large mergers and acquisitions. Investment in oil and gas exploration also rose significantly, by 77% compared with FY2006, and reached $480 million by May 2007. The tobacco and cigarette industry also registered a steep increase to $389 million in FY2007 from only $2.3 million in FY2006. This was mainly the result of an investment of $382 million by Philip Morris International to take over Lakson Tobacco.

Even with a record amount of FDI, efforts need to be made to lessen the level of concentration. Success will not only increase total FDI flows but will also result in reduced volatility attached to these flows. Unlike some other countries in the region, Pakistan attracts little FDI into manufacturing. This feature needs to be remedied to stimulate economic and employment growth, by bringing in improved technologies, business practices, and innovation so as to raise the level of manufacturing competitiveness and to accelerate structural change. In Part 2 of this *Update*, the role of FDI and wider supply-side considerations in promoting export performance are analyzed. Part 3 of *Asian Development Outlook 2007* discusses the role that diversification within manufacturing plays in promoting broader growth.

Inflow of foreign direct investment



Source: State Bank of Pakistan, available: http://www.sbp.org.pk, downloaded 21 August 2007.

Click here for figure data

climbed steeply to $13.3 billion (Figure 3.6.7). External debt as a share of GDP continued declining, to 26.9%.

Prospects

On the basis of strong demand, bolstered by increased private and public investment, the economy is seen keeping most of its momentum and achieving 6.5% growth in FY2008. The slight deceleration reflects several factors: the tightening of the monetary policy stance to contain consumer demand; the impact of high international oil prices; continued slow growth in exports, due mainly to greater international competition in the textile sector; and expected slow growth in the US economy (Pakistan's largest trading partner) in July–December 2007.

On 1 August 2007, SBP raised its discount rate from 9.5% to 10.0% and has recommended that the Government adopt quarterly ceilings for budgetary borrowings from itself. The central bank also took measures to limit refinancing from its special credit facilities. The tighter monetary policy is expected to continue to hold down nonfood inflation. The agricultural pickup in FY2007 should help ease the supply-side constraints that triggered food inflation, and good harvests in wheat, pulses, and sugar are likely to help stabilize their prices.

Overall, inflation in FY2008 is expected to subside to 6.5%. However, if the Government borrows more from the banking system to finance higher than budgeted expenditures resulting in a wider than planned

3.6.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	6.8	7.0	6.5	6.5
Inflation	7.0	7.8	6.5	6.5
Current acct. bal. (share of GDP)	-4.5	-5.2	-3.9	-5.5

Source: Staff estimates.

deficit, or if external inflows are unexpectedly strong, SBP will likely find it difficult to offset the impact on the money supply and ultimately inflation.

The Government is to continue its expansionary fiscal policy in FY2008 as announced in the June budget, with an increase in salaries and pensions of government employees, larger subsidies, and a 20% hike in development spending. Expenditure on earthquake areas will continue, and relief and rehabilitation of districts in Sindh and Balochistan, badly affected by the recent rains and floods, will add to public spending. Servicing the domestic debt will also remain at high levels. The Central Board of Revenue expects receipts to stay robust, and the Government has set a 21% improvement target in revenue collection for FY2008. Taking these factors into account, the *Update* forecasts the fiscal deficit to be 4.2% of GDP in FY2008, slightly above the government budget plan of 4.0%.

On the external side, relatively slow growth in exports is projected because of continuing weakness in textiles, while import growth is expected to be elevated, reflecting a larger oil bill and continued robust expansion in investment. Accordingly, the trade deficit is likely to remain heavy at $11.4 billion or 7.1% of GDP. While the net services and income deficits will continue to widen, workers' remittances, targeted to reach $6.2 billion, should hold the current account deficit to $8.8 billion, or 5.5% of GDP, in FY2008. This level is well beyond the *ADO 2007* estimate of 3.9% of GDP.

Overall, Pakistan's growth over the 4-year period FY2003–2007 has averaged an impressive 7.5%, and this rate could be sustained in the medium term if two conditions are met: macroeconomic fundamentals remain strong, and policy commitment to governance and economic reform continues. Also, despite recent improvements, the still-low investment and savings rates represent a constraint to achieving and maintaining high growth, and that has to be addressed.

The lack of industrial and export diversification has to be rectified, to bring down persistent growth in the current account deficits to levels consistent with sustainable financing. As a matter of some urgency, ongoing power shortages, which could become a bottleneck to growth, need to be resolved. Yet the fundamental issue is a resolution of the current political uncertainties. The forthcoming presidential and parliamentary elections must be seen by the population as fair, and need to ensure the continuity and coherence of economic policy, so as to sustain economic and governance reforms.

Philippines

GDP grew much faster than expected in the first half of 2007, led by net exports, private consumption, and government spending. For the full year, the aggregate growth forecast is revised to 6.6% from 5.4% in *Asian Development Outlook 2007* (*ADO 2007*), and the prediction for 2008 is edged up to 6.0%. Inflation forecasts are revised down for both years. Fiscal revenue collection fell behind target in the first half of this year, raising concerns about efforts to rein in the deficit and increase spending on development.

Updated assessment

GDP growth accelerated to 7.3% in the first half of 2007 from 5.6% in the first half of 2006 (Figure 3.7.1). The sharp rise was due to robust growth of net exports and private consumption, and higher government expenditure. Private consumption, accounting for more than three quarters of GDP, grew by 6.0% in the period, underpinned by an 18.1% rise (to $7.0 billion) in remittances from overseas workers. Government consumption rose by a sharp 11.8% and public sector construction investment surged by 33.8%. Both were boosted by some nonrecurring factors: recovery expenditures for typhoon-damaged areas and accelerated spending ahead of legislative and local government elections in May 2007.

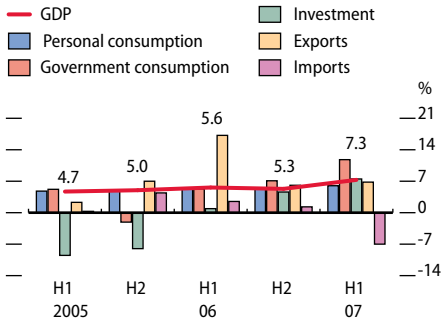
In a positive sign for future productive capacity, investment in durable equipment grew by 2.0%, after 2 years of contraction. Total investment contributed positively to aggregate growth in the first half.

On the supply side, services recorded particularly strong growth of 8.6%. Retail trade, a major subsector, expanded by 10.5% on the robust private consumption. Industry grew by 7.2%: construction and mining performed well, manufacturing less so (Figure 3.7.2). Construction was strongly supported by the jump in public sector investment. Private sector construction also grew, by 8.5%, a turnaround from a decline in the year-earlier period. Mining output (up by 24.3% in the first half) benefited from high global prices for minerals and startups of new projects. Production of coal, natural gas, and nickel increased, although from low bases. Quarrying surged with the higher levels of construction activity.

Manufacturing grew by just 3.9% in the first half, the lowest rate of expansion in several years, in part because of weakness in global demand for electronic products, a major export category. Agriculture, which was hit by typhoon damage late in 2006, recovered to grow by 4.0% in the first half of 2007.

The outlook for the full year has improved with the stronger than expected first-half performance and lower than projected inflation. Private consumption spending will continue to be boosted by remittances. On the other hand, with elections out of the way, government spending is unlikely to be as strong in the second half. The contribution of net exports is projected to decline, too, because imports were unusually weak in the first half. Moreover, a prolonged dry spell, mainly in the largest

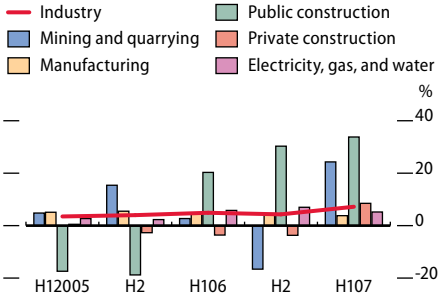
3.7.1 Growth of GDP demand components



Sources: Asian Development Outlook database; National Statistical Coordination Board, available: http://www.nscb.gov.ph, downloaded 30 August 2007.

Click here for figure data

3.7.2 Growth of industry subsectors



Sources: Asian Development Outlook database; National Statistical Coordination Board, available: http://www.nscb.gov.ph, downloaded 30 August 2007.

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island of Luzon, could hurt agricultural output. Consequently, GDP growth in the second half is not projected to match the first-half result. Still, taking into account the higher than expected private consumption and government-led investment, the GDP forecast for this year is revised up to 6.6% from 5.4% in *ADO 2007*.

Merchandise exports (on a customs basis and in US dollars) rose by 6.6% in the first half, well below the 18.2% pace in the year-earlier period. One reason for the slowdown was relatively torpid growth in exports of electronic products (6.3% against 14.7% a year ago) because of weaker global demand. Electronic products account for 60% of total merchandise exports. Garment exports fell by 11.3%, hurt by an appreciating peso. In contrast, shipments of minerals shot up by 53% owing to strong demand from markets including the People's Republic of China.

Merchandise imports on the same basis rose by only 2.3% in the first half, in part reflecting weakness in the electronic and garment industries. Furthermore, imports of fuel and of industrial equipment were flat, and imports of cereals fell sharply as domestic harvests improved early in the year. Thus, the trade deficit for the first half narrowed to $776.1 million from $1.7 billion a year earlier. This narrower gap and the rise in remittances helped bolster the current account surplus, which rose to $1.8 billion, equivalent to 5.8% of GDP, in the first quarter of this year. For the full year, the current account surplus is now expected to come in at 5.4% of GDP, revised up from 3.2% in *ADO 2007*.

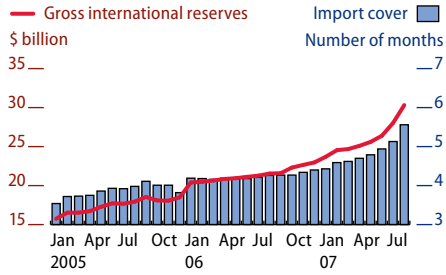
Gross international reserves increased to $30.3 billion as at end-August 2007, equivalent to 5.6 months of imports (Figure 3.7.3). Strong demand for pesos for current and capital account transactions led to a 5.2% appreciation against the US dollar in the 8 months to August (Figure 3.7.4). The real effective exchange rate appreciated by 5.1% in that period.

Despite the lift in domestic demand, inflation decelerated faster than anticipated, to average 2.6% in the January–August period. (Figure 3.7.5). The impact of a 2 percentage point rise in value-added tax early in 2006 subsided, and the peso's appreciation helped offset higher import prices. Prices of food staples were stable in the first half (although the dry weather could put upward pressure on food in the second). Lower than expected inflation in the first 8 months has prompted a downward revision in the full-year forecast to 2.9% from 4.8% in *ADO 2007*.

Broad money (M3) rose by about 20% on average in the first 6 months of 2007, double the rate of a year earlier, driven mainly by foreign exchange inflows and, to a lesser extent, by the growth of credit to the public and private sectors. Reflecting ample liquidity in the banking system, interest rates on domestic treasury bills eased: the nominal yield on 91-day bills declined below comparable US treasuries in November 2006, for the first time in 25 years, and this relationship has been maintained this year (Figure 3.7.6).

Bangko Sentral ng Pilipinas, the central bank, concerned that the strong growth in money supply posed inflation risks, in May moved to drain surplus liquidity. It encouraged government-controlled corporations to deposit funds with the central bank and made available a special deposit account facility to a wider range of financial institutions. In July, the monetary authorities ended a tiering system on rates paid to banks

3.7.3 Reserves



Source: Bangko Sentral ng Pilipinas, available: http://www.bsp.gov.ph, downloaded 7 September 2007.

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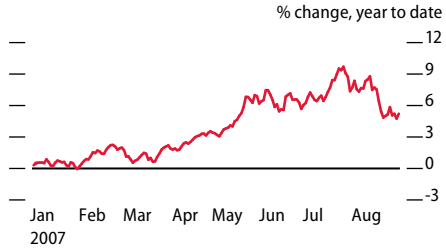
3.7.4 Peso against US dollar



Note: A point above zero indicates an appreciation of the peso.

Source: CEIC Data Company Ltd., downloaded 3 September 2007.

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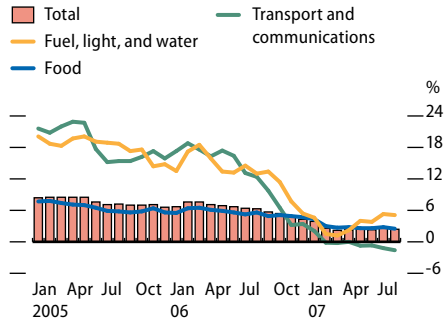
3.7.5 Monthly inflation



Sources: National Statistics Office, available: http://www.census.gov.ph; CEIC Data Company Ltd.; both downloaded 5 September 2007.

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on overnight deposits, an arrangement that had been introduced late in 2006 to encourage banks to lend. Simultaneously, the central bank cut key policy rates. It has described the overall impact on monetary policy of these July changes as neutral.

The Government has made significant progress in narrowing the wide fiscal gap over recent years, reining in the fiscal deficit to 1.1% of GDP in 2006, the narrowest in 9 years, through, among other measures, broadening the tax base and raising the value-added tax. This year's deficit target was set at P63.0 billion, or 0.9% of GDP. However, revenues collected in the first half of 2007 fell short of programmed levels, so that the deficit was P9.7 billion wider than target (Figure 3.7.7).

Proceeds from privatization are expected to be used to cover shortfalls in revenues. The Government raised P43 billion from the sales of stakes in various corporations, as well as some property, in the first 7 months of 2007. More asset sales are planned.

Outstanding government debt declined by 5.4% in the first half from a year earlier, to P3.78 trillion ($81.6 billion). However, the still-high debt (about 60% of GDP, excluding contingent liabilities of debt guarantees to state-controlled companies; Figure 3.7.8) and the large share of interest payments in the budget (they consumed 25.4% of total revenues in the first half) expose the economy to swings in sentiment in financial markets.

The labor market strengthened somewhat with faster economic growth. In April, the unemployment rate was 7.4% on a preliminary basis, down from 8.2% a year earlier, and the underemployment rate declined to 18.9% from 25.4%. Business process outsourcing has been an encouraging field for job creation. It boosted employment from 2,400 to 237,400 between 2000 and 2006 and has potential to grow more. That would require diversification into higher value-added segments, such as medical transcription, back-office processing, and digital content, which in turn needs skills training. Job creation is a major challenge for the country, given that 43 million people live on less than $2 a day and the labor force is increasing by 2% a year.

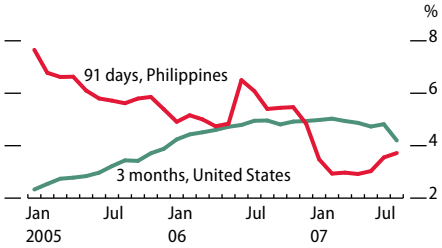
Prospects

Robust growth is expected to be sustained in 2008, though not at the pace of this year. Services will continue to be the main driver, supported by growth in remittances and therefore in consumption. Retail trade and transport, residential real estate, and communications services are expected to expand strongly. Services as a whole is projected to grow by 7.4% next year (Figure 3.7.9).

In industry, export-oriented manufacturing will do better if global demand for electronic products picks up as projected, but mining and quarrying are likely to decelerate from the rapid expansion seen in 2007. Government expenditures on infrastructure will support growth of construction. Industry as a whole is expected to grow at around 5.0%, and agriculture, assuming normal weather conditions, at 3.9%.

Improvements in the business climate brought about by lower inflation and reductions in the fiscal gap will likely mean slightly higher growth in total investment next year. There are signs that foreign direct investment is starting to pick up: major commitments have been made

3.7.6 Treasury bill rates



Sources: Bangko Sentral ng Pilipinas, available: http://www.bsp.gov.ph; Board of Governors of the Federal Reserve System, available: http://www.federalreserve.gov; both downloaded 7 September 2007.

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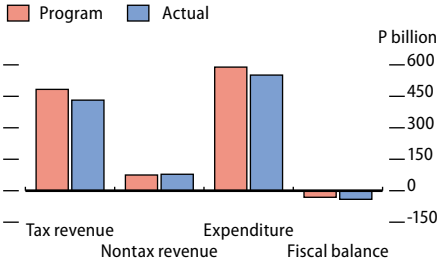
3.7.7 Fiscal performance, first half 2007



Source: Department of Finance, available: http://www.dof.gov.ph, downloaded 31 August 2007.

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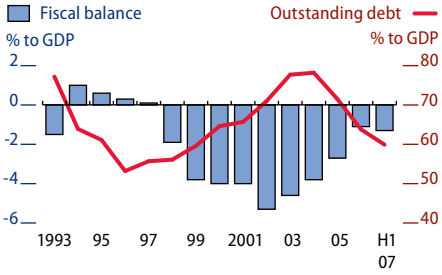
3.7.8 Fiscal indicators



Sources: National Statistical Coordination Board, available: http://www.nscb.gov.ph; CEIC Data Company, Ltd.; Bureau of the Treasury, available: http://www.treasury.gov.ph, all downloaded 30 August 2007.

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by a Korean ship-building company, a PRC glass manufacturer, and a US semiconductor company. Net foreign direct investment rose by 16% in the first half of 2007, to a still-modest total of $1.2 billion. Certainly a lift in investment would be welcome: the ratio of gross domestic investment to GDP declined from 21.2% to 14.3% between 2000 and 2006, curtailing economic growth and employment generation. Increased government investment in infrastructure should further enhance the business climate. (The budget proposed for 2008 includes a 20% increase in development expenditures.) Taking into account the various influences, the forecast for GDP growth in 2008 is revised up to 6.0% from 5.7% in *ADO 2007*. Given the moderation in inflationary pressures, the inflation forecast for 2008 is revised down to 3.5%.

Merchandise export growth is projected to be supported by some strengthening of global demand for electronic products next year. If the rest of Asia grows as projected, this will benefit the Philippines: its share of total exports going to East Asia (excluding Japan) and ASEAN has increased from 25.5% in 1997 to 41.9% in 2006 (Figure 3.7.10). However, some of these exports are used in the other Asian countries to make products ultimately shipped to the US, so that an unexpected weakening in that market would also have an impact on Philippine exports to the rest of Asia. Merchandise imports are projected to pick up from this year's weak level because of the growth in consumption and investment, and to provide inputs for the electronics industry. The current account surplus is projected at 5.2% of GDP, close to this year, but revised up from *ADO 2007*.

Planned reforms of the power sector, if achieved, would bring several benefits. The Government aims to privatize power generation and transmission as a way to stimulate investment in the sector and reduce its costs. One goal is to sell 70% of the power generation assets in Luzon and Visayas by end-2008. Having started with sales of relatively small hydropower plants, the Government expects to sell major facilities, including two 600 megawatt coal-fired thermal plants, and to award the concession for transmission assets in 2007 and 2008. Progress would improve the investment climate and the fiscal position (long-term debt of the power sector is a major portion of government contingent liabilities).

The main domestic risk to this outlook is related to fiscal reform. Improvement in the fiscal performance in 2006 raised optimism about the country's economic prospects, as illustrated by an increase in net portfolio investment in the first 7 months of 2007 to $3.6 billion, four times as large as a year earlier. However, the shortfall in (mainly tax) revenues in the first half of 2007 has raised concerns about the fiscal consolidation program. If the Government's efforts stall, sovereign borrowing costs could rise. Privatization proceeds are not recurrent, so cannot always be relied on to fill the budget gap. A balanced budget is targeted for 2008, but that still requires privatization proceeds to cover planned expenditure.

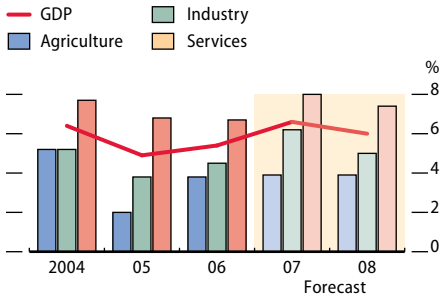
Higher tax revenues are all the more important as the Government's stance on fiscal expenditures has shifted from austerity (seen in a decline of government expenditures from 19.9% of GDP in 2002 to 17.3% in 2006) to an expansion of development spending. If revenues do not rise commensurately, the public investment program may need to be trimmed, or the fiscal deficit allowed to widen.

3.7.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	5.4	6.6	5.7	6.0
Inflation	4.8	2.9	5.0	3.5
Current acct. bal. (share of GDP)	3.2	5.4	2.9	5.2

Source: Staff estimates.

3.7.9 GDP growth



Sources: Asian Development Outlook database; staff estimates.

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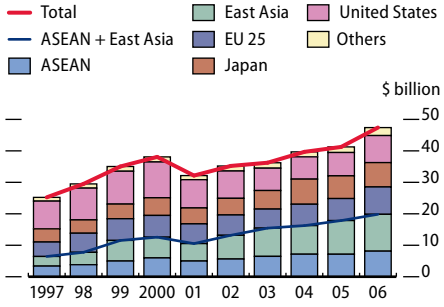
3.7.10 Direction of exports



Source: CEIC Data Company Ltd., downloaded 2 August 2007.

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Thailand

Better than expected net export performance is helping offset sluggishness of consumption and investment caused by political uncertainties, thus keeping the GDP growth projection for 2007 at 4.0%. The soft domestic activity has, though, prompted a downward revision in the inflation forecast. Domestic demand is expected to pick up in 2008, if consumer and business confidence returns after elections for a new government. The GDP growth projection for next year remains at 5.0%.

Updated assessment

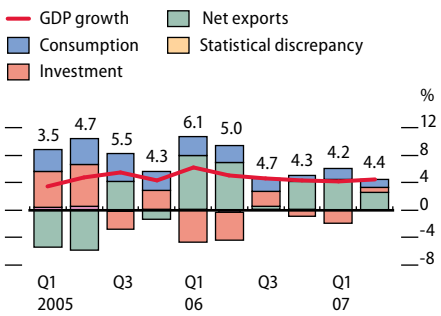
The economy grew by 4.3% in the first half of 2007. Net exports were the driving force (Figure 3.8.1), as domestic demand weakened due to disruptions in the political environment and a lack of clarity about economic policy direction. (An interim Government was installed after a military coup in September 2006, and national elections are planned for December this year.) Private consumption, hurt by weakness in consumer confidence (Figure 3.8.2), expanded modestly by 1.1% in the first half. Unsettled politics also hurt gross fixed investment, which fell by 0.6%, with private fixed investment down by 1.5% (Figure 3.8.3).

The interim Government accelerated its spending to buttress domestic demand: almost 70% of annual state-owned enterprise investment was disbursed in the first 6 months of FY2007 (ending 30 September 2007). Domestic demand is expected to remain weak for the rest of 2007. Private consumption is seen growing by 2%, around the same range as projected in *Asian Development Outlook 2007* (*ADO 2007*) earlier this year, but forecast growth in total fixed investment is revised down to 2% from 5%. Taking into account stronger than expected net exports, the projection for full-year GDP growth is maintained at 4.0%, the lowest rate in 6 years.

On the production side, agriculture grew by 6.2% in the first half, accelerating from a year earlier, on an increase in sugarcane and cassava production. But growth in industry and services combined slipped to 4.2%, reflecting slowdowns in light industries, high-technology industries, and hotels and restaurants.

The external side performed better than anticipated, with exports stronger and imports weaker than forecast in *ADO 2007*. Merchandise exports grew by 18.4% in the first half of 2007 (Figure 3.8.4): agriculture's were up by 15.6%, partly a result of higher rice prices, and industry's by 19.1%, led by electrical appliances, automobile parts, and construction materials. Shipments to India and Eastern Europe, relatively small but increasingly important markets for Thailand, recorded particularly strong growth as these economies accelerated. In the second half, export growth is likely to ease, partly because the baht has continued to appreciate, which is damping orders for some exports, and in July, export growth decelerated sharply to 6.2%. A decision by the United States (US) in June to reduce preferential treatment for some imports from Thailand,

3.8.1 Contributions to growth (demand)



Source: National Economic and Social Development Board, available: http://www.nesdb.go.th, downloaded 3 September 2007.

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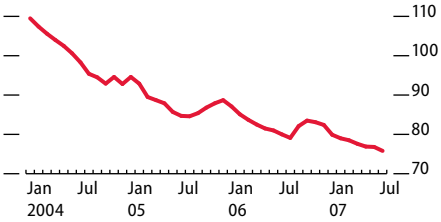
3.8.2 Consumer confidence index



Note: A reading of less than 100 denotes deteriorating confidence.

Source: Center for Economic and Business Forecasting, University of Thai Chamber of Commerce, available: http://www.utcc.ac.th, downloaded 25 August 2007.

Click here for figure data

including gems and jewelry, should have a fairly limited impact on exports. For all this year, total exports are projected to grow by 12.5%.

Imports in January–June rose at the modest rate of 6.4%, affected by the slack domestic demand. Capital goods imports barely grew (by 0.3%), reflecting weak investment (stemming from shakier business confidence), and fuel imports fell by 3.4%. Imports could pick up modestly in the second half, given depletion of inventories of imported materials and the firmer exchange rate.

The solid first-half export performance, combined with weak imports, generated a merchandise trade surplus of $5.1 billion, a sharp turnaround from a deficit of $1.9 billion a year earlier. Net income from tourism, transportation, and remittances was also strong. Together these moved the current account into surplus, at $6.2 billion, compared with a deficit of $1.6 billion in the first half of 2006. The full-year figures for the trade surplus and net income are projected to be stronger than forecast in *ADO 2007*. Drawing these strands together, the projection for the current account surplus for 2007 is revised up to 3.0% of GDP, from 1.3%.

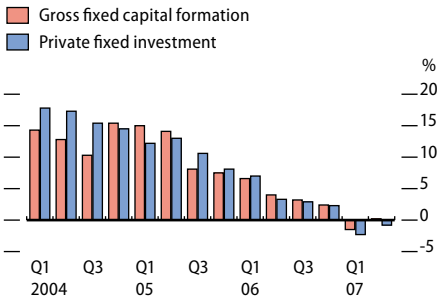
The rising current account surplus and a surge in private capital inflows into the Thai stock market boosted foreign exchange reserves to $72.1 billion in July 2007, equivalent to 3.8 times short-term external debt and to 6 months of imports. The higher foreign reserves also reflect central bank sales of baht to moderate the currency's appreciation. Even so, the baht appreciated by 4.8% against the US dollar by late August from end-2006. The Stock Exchange of Thailand index of share prices rose by 20% over those 8 months.

Controls introduced in December 2006 to curb capital inflows and to slow currency appreciation were gradually eased, although a 30% non-interest-bearing reserve requirement on unhedged external borrowing and foreign purchases of Thai debt securities remains in place (stock market investments are exempted). In July 2007, the interim Government relaxed rules on Thai residents' foreign investment and foreign currency holdings. Also, the Finance Ministry aims to refinance $3.2 billion in foreign debt held by the Government and state-owned enterprises to help reduce upward pressure on the baht by increasing demand for foreign currency to repay external creditors.

Soft domestic demand has weakened inflation pressures: average consumer price inflation was only 2.0% in the first 8 months of 2007. In August, year-on-year inflation slowed to 1.1% (Figure 3.8.5), with core inflation (i.e., excluding volatile food and energy), at just 0.7%. Such figures allowed the Bank of Thailand scope to lower its policy interest rate by 175 basis points to 3.25% between January and August. Inflation is likely to remain low over the rest of this year, assisted by currency appreciation (cushioning rising oil prices), and softer than expected domestic demand (limiting firms' ability to raise prices). For all 2007, inflation is forecast at 2.0%, revised down from 2.5% in *ADO 2007*.

On the fiscal side, the Government targeted a budget deficit equivalent to 1.7% of GDP in FY2007. Government consumption spending looks set to rise by 11%, helping bolster domestic demand. As for the public infrastructure program, which projected investment of as much as $42 billion on a variety of major projects in 2005–2009, the interim Government had aimed to make progress this year on expanding mass

3.8.3 Fixed investment growth



Source: National Economic and Social Development Board, available: http://www.nesdb.go.th, downloaded 3 September 2007.

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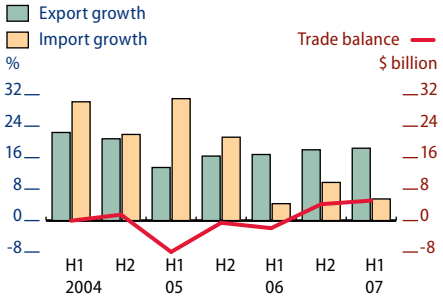
3.8.4 Trade indicators



Source: Bank of Thailand, available: http://www.bot.or.th, downloaded 31 August 2007.

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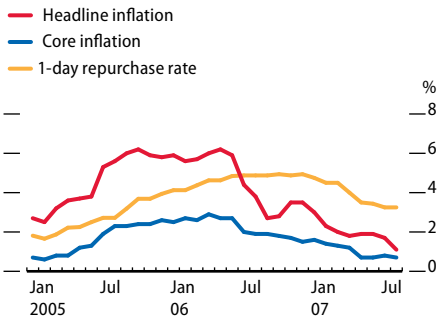
3.8.5 Inflation and policy interest rate



Note: Core inflation excludes fresh food and energy items.

Source: Bank of Thailand, available: http://www.bot.or.th, downloaded 3 September 2007.

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transit rail lines for Bangkok—a significant part of the program—but contract bidding was postponed. Some projects, such as investment in energy, water resources, and low-cost housing, have gone ahead over the past couple of years, but others have faced delays.

Prospects

The outlook for 2008 assumes that national elections are held in December this year as planned and that an elected government pursues a credible economic program. In that case, consumer and business confidence would likely revive. Private investment would pick up, supported by the reduction in interest rates this year and fairly high capacity utilization (75% in July). A new government would likely continue with the public infrastructure program: energy, water, and health projects are already in the FY2008 budget. The question is how quickly it could start building the mass transit lines.

This year's appreciation of the baht is likely to crimp growth of some exports in 2008, especially those with low levels of imported content, as well as agricultural products and clothing. However, export growth is still expected to achieve the level foreseen in *ADO 2007*. Imports will pick up as companies rebuild inventories and domestic demand starts to revive. On this basis, the forecast for GDP growth next year is maintained at 5.0% (Figure 3.8.6). Inflation is projected to edge up to 2.5% on average—an unchanged forecast from *ADO 2007* (Figure 3.8.7)—as firmer domestic demand paves the way for price increases.

Moderating export and strengthening import growth would result in a trade surplus lower next year than this year, but still considerably higher than that forecast in *ADO 2007*. The current account is now seen posting a small surplus (0.5% of GDP), as opposed to a deficit (of 0.7%) in *ADO 2007*.

For FY2008, the Government has approved a budget with a deficit of B165 billion, or 1.8% of GDP. The total public-investment budget will increase by 8% relative to FY2007, with additional allocations for the mass transit system, energy, and the petrochemical industry. The aim of this expansionary fiscal policy is to stimulate domestic demand. The incoming government will have the fiscal space to further raise public investment if required, as public debt at end-May 2007 stood at 38.2% of GDP, well within a self-imposed 50% ceiling under the fiscal sustainability framework.

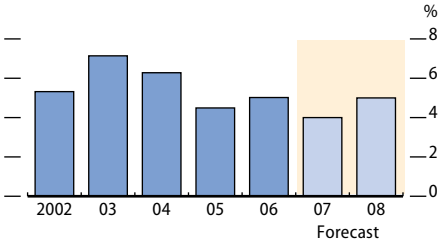
The main risk to this outlook involves a continuation of policy uncertainty into 2008, if the newly elected government cannot quickly implement a sound program for the economy. Further weakness in domestic demand would make the economy susceptible to any unexpected reduction in external demand, the main element underpinning growth so far in 2007.

3.8.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	4.0	4.0	5.0	5.0
Inflation	2.5	2.0	2.5	2.5
Current acct. bal. (share of GDP)	1.3	3.0	-0.7	0.5

Source: Staff estimates.

3.8.6 GDP growth



Sources: National Economic and Social Development Board, available: http://www.nesdb.go.th, downloaded 3 September 2007; staff estimates.

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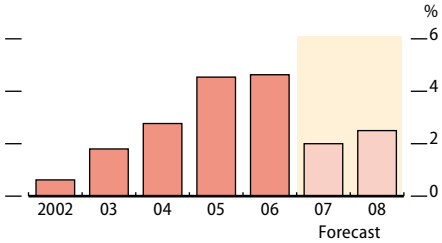
3.8.7 Inflation



Sources: Bureau of Trade and Economic Indices, available: http://www.price.moc.go.th/web4_e/cpi/index.asp, downloaded 31 August 2007; staff estimates.

Click here for figure data

Viet Nam

Buoyant investment and consumption drove robust economic growth in the first half of 2007. A surge in imports, partly investment-related, widened the trade deficit more than expected in *Asian Development Outlook 2007* (*ADO 2007*). GDP growth forecasts for all 2007 and for 2008 are maintained at rapid rates of 8.3% and 8.5%, respectively. The wider trade gap now points to current account deficits in both years. With stronger than expected inflation (and upward revisions to the forecasts), the Government has taken steps to contain the price pressures.

Updated assessment

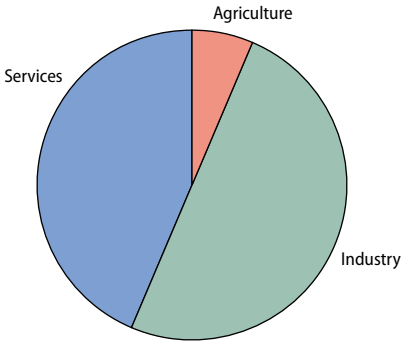
A half percentage point faster than the year-earlier period, the economy accelerated to 7.9% growth in January–June 2007, with nearly all of it coming from industry (3.9 percentage points) and services (3.4 percentage points) on the production side (Figure 3.9.1). Private industry expanded by 20.5%, more than double the pace of state enterprises. Among subsectors, manufacturing grew by a robust 12.3%, but mining (showing minimal growth) suffered from a 7.4% contraction in crude oil production as output at the White Tiger oil field, the biggest in Viet Nam, declined. In services, trade and finance grew by 10.4% and the hotels and restaurants subsector, benefiting from buoyant consumption and increased tourism, rose by 12.7%.

Agriculture, hit by drought, avian flu, and livestock diseases, put in a weaker performance in the first half than a year earlier, to contribute only 0.5 percentage points to aggregate expansion. This sector still accounts for about 55% of total employment, however.

On the demand side, strong investment and consumption were the main drivers. Investment grew by 14% in the first half, stimulated by Viet Nam's entry into the World Trade Organization (WTO) in January 2007 and by improvements in the business environment. Much of investment's growth is from the domestic private sector, whose share of overall investment increased to about 35% in the first half of 2007 (up from 23% in 6 years). As part of efforts to maintain improvements in the business climate, a "single window" at the Department of Planning and Investment has been set up in some cities to streamline procedures and reduce the time needed for starting a business.

Foreign direct investment (FDI) approvals in the first 7 months of this year rose by about 55% to $6.4 billion and seem headed for a record $13 billion for the full year. An increasing share is going into property (in anticipation of rising demand for offices and commercial buildings) and into tourism. Consumption growth was supported by wage increases, particularly for skilled workers who are in short supply, and remittances from Vietnamese living abroad. Retail sales of goods and services in nominal terms rose by an estimated 23% in the first half of 2007, slightly above the pace of a year earlier (Figure 3.9.2).

3.9.1 Contributions to growth (supply), first half 2007



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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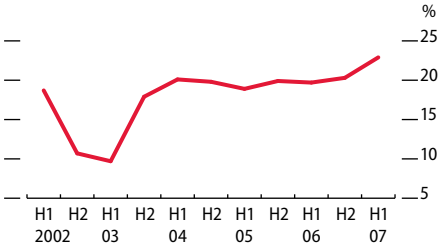
3.9.2 Growth of retail sales of goods and services (nominal)



Sources: General Statistics Office of Viet Nam, available: http://www.gso.go.vn; CEIC Data Company Ltd.; both downloaded 31 August 2007.

Click here for figure data

Since GDP usually picks up in the second half of the year, mainly because budget disbursements accelerate, economic growth for all 2007 is forecast to be 8.3%, unchanged from the *ADO 2007* projection.

Buoyant investment led to a steep 30.4% increase in merchandise imports in the first half of 2007, about double the year-earlier rate. Imports of capital goods surged by 46.5%, and imports of raw materials and intermediate goods were also vigorous (Figure 3.9.3). Growth in merchandise exports, in contrast, slowed to 19.4% from 25.7% (Figure 3.9.4). The value of crude oil exports fell by 10%, largely because of the drop in oil production. Seafood exports, one of the biggest export categories, were hurt by concerns in some overseas markets about contamination of shrimp by antibiotics. Other export categories performed robustly, though: coffee exports more than doubled as global coffee prices increased, and textiles and clothing rose by 25.9% after the abolition of quotas following WTO accession. Exports of wooden furniture, which have grown rapidly in the past couple of years, rose by 23%.

As a result of these trends in the first half, the trade deficit widened sharply to $4.8 billion, equivalent to about 16% of GDP, from $2.0 billion in the year-earlier period. Concerns were, though, largely assuaged by the composition of imports: much of their increase reflected capital goods and other inputs for export production (the clothing industry, for example, imports almost 70% of its inputs). Moreover, the external position is supported by rising remittances and tourism receipts. With the deterioration in the trade gap, Viet Nam is now forecast to have a current account deficit equivalent to 5.0% of GDP this year, revised from a small surplus expected in *ADO 2007*.

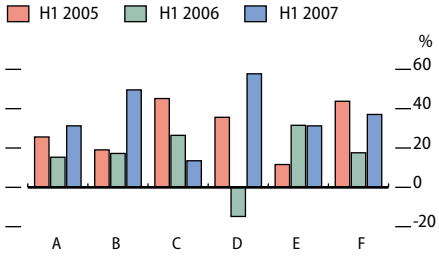
Strong FDI inflows and a rise in portfolio investment contributed to a surplus in the overall balance of payments. The State Bank of Viet Nam, the central bank, accumulated additional foreign exchange reserves of $7 billion in January–July to reduce upward pressure on the currency. The Government in January 2007 widened the dong's daily trading band against the dollar from 0.25% to 0.5%, allowing for more flexibility in monetary policy.

The impact on money supply of FDI and portfolio inflows was only partly offset by central bank sterilization operations, leading to a liquidity buildup. Credit soared by 35% in the first 6 months, above the central bank's full-year target of 25%. High levels of liquidity, plus heavy domestic demand and some food supply issues, pushed inflation up to 8.6% in August, taking the average inflation rate for the first 8 months of this year to 7.4% (Figure 3.9.5). Food prices rose, driven by outbreaks of avian flu and a pig disease that caused meat shortages.

Administered energy prices went up, too. The Government, phasing out energy subsidies, raised prices of electricity (by 7.6%), and coal (20%) early in the year and subsequently abolished a subsidy on gasoline (keeping subsidies for kerosene and diesel). Largely as a result, gasoline prices rose by 7.6% in the first 8 months. The heightened inflation pressures have prompted an increase in the full-year forecast to 7.8% from 6.8% in *ADO 2007*.

The authorities have taken several steps to contain price pressures. The State Bank of Viet Nam increased issuance of bills to drain excess liquidity and in June it raised the reserve-requirement ratio for banks

3.9.3 Merchandise import growth (total and major categories)



A = Total imports; B = Machinery and spare parts; C = Petroleum; D = Steel productsr; E = Fabrics; F = Electronic products.

Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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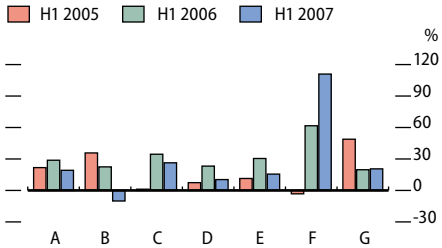
3.9.4 Merchandise export growth (total and major categories)



A = Total exports; B = Crude oil; C = Textiles and clothing; D = Footwear; E = Fisheries products; F = Coffee; G = Computer and electrical components.

Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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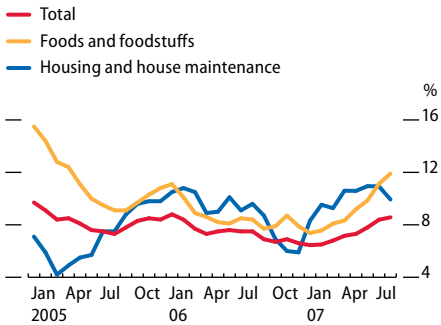
3.9.5 Inflation (total and high inflation categories)



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

Click here for figure data

from 5% to 10%. The Ministry of Finance in August lowered import tariffs on 18 groups of commodities to assist in the inflation-fighting effort. Tariff rates on food and construction materials were cut by at least half. As part of this effort, the Government in July had already dropped a plan to increase wages across the public sector.

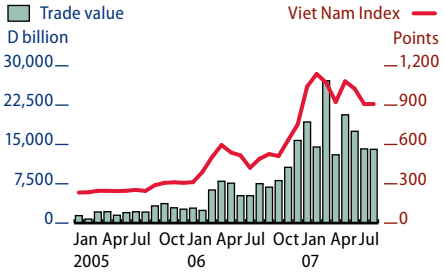
Fiscal policy remains expansionary as the Government invests heavily in infrastructure. This has led to a widening fiscal deficit and an increasing public debt. The overall fiscal deficit is expected to reach 5.0% of GDP in 2007.

In policy developments, Viet Nam lowered its average tariff rate from 17.4% to 14.5% under its WTO commitments, and the average rate is scheduled to come down further over the next few years. The increased competitive pressures from deepening integration with global markets have emphasized the need to reform state-owned enterprises (SOEs). The Government plans to equitize (partly privatize) an additional 1,500 SOEs, out of the remaining 2,100, by 2010. Among moves already made, state-owned Bao Viet Insurance Corporation, the largest insurance company, issued shares through an initial public offering in June 2007, and others are lining up to do this. In addition, the state's holdings in fully and partly owned SOEs are being transferred from ministries and provincial governments to the State Capital Investment Corporation, which is likely to reduce the involvement of ministries in the management of the enterprises.

A WTO commitment to open banking to foreign ownership is underlining the urgency of reforming state-owned commercial banks as well. The Government encouraged this in April by raising the stake that foreign banks and investors can hold in Vietnamese banks, from 10% to, in most cases, 15%. Two state-owned banks—Vietcom Bank and Mekong Housing Bank—plan to make initial share offerings, but volatility in the stock market has caused some slippage of the schedule.

The stock market boomed through 2006, with the Viet Nam Index of share prices climbing by 144%. In the first 10 weeks of 2007, the index rose by a further 50%, but has since dropped by about 20% from the record set in March (Figure 3.9.6). Stock market capitalization of listed companies has increased to the equivalent of about 28% of GDP this year, from just 5% in 2005. The central bank, concerned that banks might be taking on excessive risk exposure to stocks and about the impact on inflation of rapid credit growth, in June called on banks to limit lending for share purchases to a ceiling of 3% of total loans by end-2007.

3.9.6 Ho Chi Minh City stock trading center



Source: CEIC Data Company Ltd., downloaded 31 August 2007.

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Prospects

The outlook for next year assumes that WTO accession will further integrate the economy into global business networks, encourage FDI, and help maintain the momentum for domestic reforms, which are generally improving the business environment. Investment is forecast to grow by about 15% in 2008, similar to this year, taking it to 41% of GDP. Robust consumption will be underpinned by rising wages for skilled employees and by remittances.

Led by strong growth of two of its components—manufacturing and construction—industry is expected to grow by 10.6% in 2008. Higher

3.9.1 Selected economic indicators (%)

	2007		2008	
	ADO 2007	*Update*	*ADO 2007*	*Update*
GDP growth	8.3	8.3	8.5	8.5
Inflation	6.8	7.8	6.3	6.8
Current acct. bal. (share of GDP)	0.2	-5.0	1.3	-4.7

Source: Staff estimates.

value-added products, including computers and electronic goods for export, constitute an increasing share of manufacturing output. In construction, projects under way or planned include major hotels and resorts, as well as high-end office and apartment buildings in Hanoi and Ho Chi Minh City. Public sector construction will emphasize the building of roads, ports, and power generation facilities.

Services, spurred by consumption and tourism, as well as the gradual opening of some subsectors to foreign participation, is projected to grow by 8.6% next year. Subsectors likely to expand fastest are banking and finance, trade, transport and telecommunications, and tourism. Agriculture is projected to pick up to 3.1% in 2008, slightly faster than this year's weaker than usual pace. On these influences, GDP growth for 2008 is projected to edge up to 8.5% (Figure 3.9.7), in line with the *ADO 2007* forecast.

Trade benefits from WTO accession are expected to keep export growth brisk in 2008, at 22%. Clothing exports will build on the gains made from the ending of quotas on Vietnamese garments. In addition, the shrimp industry has improved its quality control, and this should lift exports.

Import growth is seen staying high, reflecting the continued need for capital goods (to support investment spending) and for export-related inputs. The current account deficit is projected at 4.7% of GDP in 2008 (Figure 3.9.8), similar to that in 2007 but marking a revision from a small surplus forecast in *ADO 2007*. Inflows of FDI, portfolio investment, and aid are seen maintaining a surplus in the overall balance of payments.

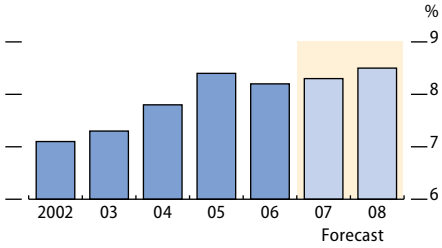
Strong domestic demand and high levels of liquidity related to the balance-of-payments surplus will likely see little dissipation of strong inflation pressures. Average inflation for 2008 is forecast at 6.8%, easing from 2007's rate but revised up from 6.3% in *ADO 2007* (Figure 3.9.9). The fiscal stance is expected to remain expansionary, with an estimated fiscal deficit of 5.0% of GDP.

Pressing challenges involve reining in inflation, addressing bottlenecks in infrastructure (particularly electricity and ports), and tackling skilled-labor shortages. Demand for electricity is growing by 17% annually, overtaxing the system, and leading to power outages. Just over half the power supply comes from hydropower, which is vulnerable to drought. Consequently, six new FDI-funded thermal power plants are planned, at a cost of $8.5 billion. They are currently awaiting government approval.

Given the heavy investment required in infrastructure, and the constraint imposed by a 5% budget deficit, greater private participation in infrastructure would help accelerate the program and reduce the strain on the public debt, which has grown rapidly to about 45% of GDP. The encouragement of private participation in building power facilities in the past 2 years is a welcome step in this direction.

A business forum in May 2007 identified difficulties in finding skilled labor as a key constraint in doing business in the country. Deficiencies in the education system are largely to blame for this bottleneck, and recognizing this, the authorities are taking some steps to change the education system, including encouraging privately operated schools and universities. Removing the 3% limit on the number of foreign employees in an enterprise would also help.

3.9.7 GDP growth



Sources: Asian Development Outlook database; staff estimates.

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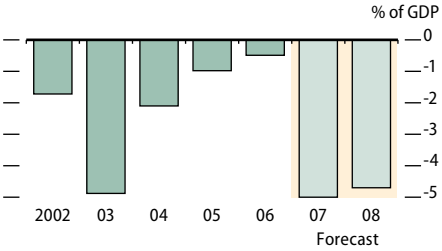
3.9.8 Current account balance



Sources: Asian Development Outlook database; staff estimates.

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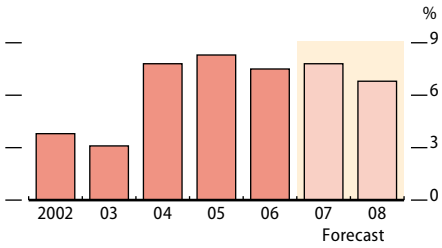
3.9.9 Annual inflation



Sources: Asian Development Outlook database; staff estimates.

Click here for figure data

Part 4

Technical notes

GDP growth and inflation forecasting performance of *Asian Development Outlook*

Asian Development Outlook (ADO) has been the flagship publication of the Asian Development Bank (ADB) since 1989. Issued twice a year since 1999—both in April, the "main" *ADO,* and in September,[1] the *ADO Update*—the publication contains country economic data and analysis, and projections of key macroeconomic variables. It provides important context for ADB's policy dialogue with its member countries and other stakeholders, and guides ADB management in its views on important development and economic issues.

Since its inception, the April issue of *ADO* has provided current- and next-year forecasts for a range of macroeconomic aggregates; the September release also does this, and analyzes the performance of each developing member country (DMC) during the first half of the year.

This second evaluation of the forecasting performance of *ADO* for real gross domestic product (GDP) growth and inflation—the first was in *ADO 2006 Update*—provides an update. It expands coverage from nine to 14 DMCs, enabling analysis not only across DMCs but also across three subregions (East Asia, South Asia, and Southeast Asia). Additional sample points are added for 2006.

Measuring forecasting quality

This evaluation again centers on the forecasting errors of real GDP growth and inflation. Current- and next-year forecasts for 14 DMCs, from 1990 to 2006, are considered. (The 14 DMCs are Bangladesh; People's Republic of China [PRC]; Hong Kong, China; India; Indonesia; Republic of Korea; Malaysia; Pakistan; Philippines; Singapore; Sri Lanka; Taipei,China; Thailand; and Viet Nam.) Forecasts released in April and in September are also compared with each other. The forecast errors are benchmarked against Consensus Economics forecasts for the period 2000–2006 (i.e., after the Asian financial crisis that began in 1997).

As a measure of the accuracy of forecasts, the size of the forecast error—the difference between the actual value and the forecast for a given year—is used. As both April and September releases of *ADO* are used in this investigation, two sets of current- and next-year forecasts are shown. For example, the April current-year forecast error in GDP growth in 2006 is the difference between actual growth in 2006 and the forecast made in *ADO 2006*; the September current-year forecast error is the difference between actual growth in 2006 and the forecast made in *ADO 2006 Update.*

Similarly, the April next-year forecast error is the difference between actual growth in 2006 and the forecast made in *ADO 2005*; the September next-year forecast error is the difference between actual growth in

2006 and the forecast made in *ADO 2005 Update*. *Positive forecast errors* indicate underprediction and *negative forecast errors* indicate overprediction.

The current-year forecasts provided in September should be considered only partial forecasts as they already draw on some information on outcomes. Self-evidently, more information for a given calendar year is available in September than in April that year: first-half GDP estimates and up to 7 months of inflation data are available for most DMCs.

Three measures of accuracy and bias are considered in this investigation: mean absolute error (MAE), root-mean-square error (RMSE), and fraction of positive errors (FPE). Mean error, a common measure of forecast accuracy and bias, is not used in this evaluation as it is sensitive to the sign of the error: positive and negative values cancel and give misleading results. It is for this reason that MAE and RMSE are used, which cumulate errors irrespective of their arithmetic sign. Low values for these two measures indicate greater accuracy. Of the two, the RMSE gives greater weight to large forecast errors.

With regard to FPE, a result higher than 0.50 indicates a general tendency for the forecasts to underpredict actual values; conversely, a figure lower than 0.50 indicates a tendency to overpredict. Additional tests are applied to detect whether there is a systematic bias in the sign of the forecasting error and to assess the forecasts' ability to predict changes in direction.

Ideally, exposure to more information should result in a smaller forecast error, i.e., greater accuracy. This suggests that the current-year forecast error ought to be smaller than that for the next year. Similarly, September current- and next-year forecast errors should be smaller than April errors (since by that time more information is available). In addition, a shorter forecast horizon (and therefore less uncertainty) should not only result in greater accuracy on average but also less variance in the prediction. This suggests that the variance of the current-year forecast error should be lower than that for the next year. Similarly, for both the current- and next-year forecasts, the variance of the September forecast errors should be smaller than April's.

Forecasting record of April issue of *ADO*

Tables 4.1.1 and 4.1.2 report summary statistics for the forecast errors for both current- and next-year forecasts for GDP growth and inflation for each of 14 DMCs, grouped by subregion. The MAE, RMSE, FPE, and standard deviation are shown.

GDP growth

Current-year forecasts. For GDP growth, the mean of the current-year forecast error (i.e., the bias averaged across time and across DMCs) in absolute terms is 1.6 percentage points. Singapore posted the largest absolute forecast error, at 2.5 percentage points, followed by Hong Kong, China and Malaysia, at 2.2 percentage points. Although Singapore showed the highest MAE, Malaysia had the highest RMSE, indicating a greater number of large forecast errors. Indeed, the current-year forecast errors

4.1.1 Descriptive statistics for forecast errors of GDP growth, April issue of *ADO*, 1990–2006

	Mean absolute error (percentage points)	Root-mean-square error (percentage points)	Fraction of positive errors	Standard deviation (percentage points)
Current-year forecast	**1.55**	**2.24**	**0.63***	**2.38**
East Asia	**1.74**	**2.60**	**0.59***	**2.62**
China, People's Rep. of	1.88	2.37	0.88*	1.75
Hong Kong, China	2.18	3.35	0.59	3.42
Korea, Rep. of	1.85	2.71	0.47	2.76
Taipei,China	1.06	1.96	0.41	1.94
South Asia	**1.08**	**1.43**	**0.57***	**1.51**
Bangladesh	0.51	0.65	0.53	0.67
India	1.33	1.64	0.65	1.69
Pakistan	1.15	1.53	0.59	1.55
Sri Lanka	1.34	1.89	0.53	1.95
Southeast Asia	**1.74**	**2.53**	**0.70***	**2.67**
Indonesia	1.58	2.79	0.76*	2.88
Malaysia	2.18	3.39	0.76*	3.49
Philippines	1.05	1.38	0.53	1.32
Singapore	2.47	3.16	0.71*	3.11
Thailand	2.06	3.05	0.65	3.11
Viet Nam	1.09	1.44	0.76*	1.39
Next-year forecast	**2.11**	**3.19**	**0.51**	**3.45**
East Asia	**2.30**	**3.39**	**0.53**	**3.50**
China, People's Rep. of	2.48	3.24	0.82*	2.77
Hong Kong, China	2.69	3.87	0.47	3.98
Korea, Rep. of	2.79	4.19	0.47	4.31
Taipei,China	1.23	2.25	0.35	2.15
South Asia	**1.39**	**1.81**	**0.40**	**1.85**
Bangladesh	0.71	0.84	0.29	0.77
India	1.51	1.81	0.59	1.87
Pakistan	1.94	2.39	0.24	2.19
Sri Lanka	1.39	2.20	0.47	2.21
Southeast Asia	**2.47**	**3.98**	**0.58***	**4.18**
Indonesia	2.51	5.37	0.65	5.51
Malaysia	2.77	4.60	0.65	4.74
Philippines	1.74	2.78	0.35	2.47
Singapore	3.41	4.19	0.59	4.31
Thailand	2.97	5.11	0.59	5.15
Viet Nam	1.46	1.86	0.65	1.91

Note: For fraction of positive errors, * indicates statistical significance at the 10% level, based on the sign test. The sign test can be used to examine if one random variable in a pair (X, Y) tends to be larger than the other variable. In this study, the two random variables are the forecast and actual outcome. The null hypothesis is that the forecast is more likely to overpredict actual growth.

Source: Staff calculations.

for Malaysia displayed the highest variability, with a standard deviation of 3.5 percentage points. By subregion, South Asia posted the lowest MAE.

A particularly high FPE (more than 70%) is observed for PRC, Indonesia, Malaysia, Singapore, and Viet Nam. The preponderance of DMCs with an FPE above 0.50 suggests a tendency for GDP forecasts in April's *ADO* to underpredict current-year GDP growth. This is supported by the sign test, which rejects the null hypothesis of likely overprediction.

Only the Republic of Korea and Taipei,China have FPEs lower than 0.50. For the former, the MAE was affected when growth was greatly overpredicted for 1998, a year in which the economy experienced a

4.1.2 Descriptive statistics for forecast errors of inflation, April issue of *ADO*, 1990–2006

	Mean absolute error (percentage points)	Root-mean-square error (percentage points)	Fraction of positive errors	Standard deviation (percentage points)
Current-year forecast	**2.20**	**3.30**	**0.35***	**4.31**
East Asia	1.78	2.27	0.28*	2.54
China, People's Rep. of	3.22	4.44	0.29*	4.53
Hong Kong, China	1.66	1.88	0.24*	1.79
Korea, Rep. of	1.06	1.33	0.29*	1.28
Taipei,China	1.17	1.41	0.29*	1.29
South Asia	**2.26**	**2.91**	**0.43**	**3.10**
Bangladesh	2.13	2.84	0.35	2.80
India	2.11	2.64	0.53	2.72
Pakistan	1.52	1.72	0.35	1.74
Sri Lanka	3.27	4.45	0.47	4.47
Southeast Asia	**2.44**	**4.26**	**0.35***	**5.74**
Indonesia	3.80	9.56	0.59	9.37
Malaysia	0.69	0.86	0.24*	0.67
Philippines	1.36	1.85	0.29	1.67
Singapore	0.83	1.15	0.06*	0.87
Thailand	1.35	2.05	0.47	1.96
Viet Nam	6.85	10.07	0.44	9.54
Next-year forecast	**3.27**	**4.89**	**0.46**	**6.48**
East Asia	**2.69**	**3.55**	**0.35***	**3.99**
China, People's Rep. of	5.14	6.63	0.29*	6.77
Hong Kong, China	2.66	3.74	0.29*	3.53
Korea, Rep. of	1.55	2.29	0.47	2.36
Taipei,China	1.41	1.56	0.35	1.39
South Asia	**2.96**	**3.91**	**0.55**	**3.96**
Bangladesh	3.47	4.30	0.53	4.33
India	2.50	3.18	0.53	3.23
Pakistan	2.71	3.27	0.53	3.36
Sri Lanka	3.18	4.87	0.63	4.59
Southeast Asia	**3.88**	**6.43**	**0.47**	**8.78**
Indonesia	5.88	12.81	0.82	12.26
Malaysia	1.14	1.27	0.24*	1.10
Philippines	2.57	3.27	0.53	3.37
Singapore	1.23	1.56	0.24*	1.29
Thailand	2.06	2.81	0.53	2.84
Viet Nam	10.78	16.86	0.44	16.59

Note: See note to Table 4.1.1. For the sign test, the null hypothesis is that the forecast is more likely to underpredict actual inflation.

Source: Staff calculations.

severe contraction in the Asian financial crisis. For the latter, GDP growth was greatly overpredicted in 2001, but the economy contracted because of an export slump in the information and communication technology sector.

Note that the general trend of underpredicting GDP growth remains even if the crisis years are deleted from the evaluation and the resulting negative bias for these years is removed from the forecasts. Without the crisis years, the FPE increases to 0.67, from 0.63.

Next-year forecasts. The MAE and the RMSE are, as might be expected, larger for next- than current-year forecasts. MAEs range from 0.71 to 3.41 percentage points, with Singapore again posting the highest

MAE. But Indonesia has the highest RMSE, and consequently the highest standard deviation.

The PRC has a preponderance of positive errors for next-year forecasts: GDP forecasts are underpredicted 82% of the time. In contrast, FPEs are very low for Pakistan (0.24), Bangladesh (0.29), Taipei,China (0.35), and Philippines (0.35). (But there is a strong tendency to underpredict GDP growth for both current- and next-year forecasts for PRC, India, Indonesia, Malaysia, Singapore, Thailand, and Viet Nam.)

As next-year forecasts are more susceptible to unexpected economic developments, they are made with less certainty and confidence than current-year forecasts; consequently, errors are more volatile. The standard deviations (many of them above 2 percentage points) of next-year forecast errors are greater than those of the current year. The increase of the spread in errors between the current- and next-year forecasts for many economies also appears quite large. As an example, the standard deviation of the forecast errors in Indonesia and the Philippines almost doubles.

Inflation

Current-year forecasts. During the early part of the 1990s, more than half the 14 DMCs under consideration experienced double-digit inflation: PRC; Hong Kong, China; India; Indonesia, Pakistan; Philippines; Sri Lanka; and Viet Nam. Viet Nam and Indonesia recorded the two highest inflation rates: 83% for the former in 1991 and 58.5% for the latter in 1998.

In a separate calculation (the results of which are not shown in a table), for Viet Nam, current-year inflation estimates were, on average, above outcomes by almost 5 percentage points. This is largely explained by the gross overestimation of inflation in 2 years, 1990 and 1991—improved supply conditions in 1991 helped lower inflation in that year. Indonesia's current-year inflation forecasts, on the other hand, were underpredicted on average by 3 percentage points—largely driven by the failure to predict the sharp increase in prices during the Asian financial crisis and in 2005 when fuel subsidies were unexpectedly cut. In terms of the more robust measures of MAE and RMSE, it is still these two DMCs that top the list: Viet Nam's forecasts are more than three times as high as the overall MAE and RMSE of, respectively, 2.2 and 3.3 percentage points, and Indonesia's are two to three times as high.

Viewed as a whole, more than 60% of the DMCs' forecast errors are negative, suggesting a general tendency of current-year forecasts of April's *ADO* to overpredict inflation. Again this is supported by the sign test, which rejects the null hypothesis that the forecasts are more likely to underpredict inflation. The FPEs are generally low, ranging from 0.06 to 0.59, and only India and Indonesia have an FPE of more than 0.50.

The same general trend again holds even if the crisis years are removed from the analysis: the forecasts are still overestimated more than 60% of the time but the MAE, RMSE, and standard deviation are smaller.

Next-year forecasts. The same overprediction tendency is seen for next-year forecasts: April's *ADO* overestimates inflation 54% of the time on average. In addition, the MAE, RMSE, and standard deviation of next-year forecasts are higher than current-year forecasts.

April versus September forecasts

Table 4.1.3 shows, for 12 DMCs, the MAE, FPE, and standard deviation of forecast errors for GDP growth and inflation for both April and September forecasts for GDP growth and inflation. (Bangladesh and Pakistan are not included as the current fiscal year for these DMCs is ended by the time the September issue of *ADO*, the *ADO Update*, is released. The "current-year forecasts" for GDP growth and inflation published in *ADO Update* for these two DMCs are already actual growth and inflation figures.)

GDP growth

September MAEs of both current- and next-year forecast errors are overall lower than April forecast errors. This general picture also holds at a subregional level. However, slight increases of MAE in September are observed for Indonesia (current-year forecasts); and for India; Philippines; Taipei,China; and Viet Nam (next-year forecasts).

Current-year GDP growth forecasts in all DMCs except the PRC and Viet Nam have smaller variances for September forecast errors. Furthermore, the reduction in the variance between April and September is quite large. For example, the standard deviation of the current-year forecast error in Sri Lanka falls from 2.67 percentage points in April to 0.31 percentage points in September, representing an 88% reduction. Overall, the standard deviation of current-year forecast errors decreases by 60%.

The same general pattern exists for the next-year forecast errors, but it is less pronounced. For the entire sample, the September forecast has a smaller standard deviation, declining by 11% relative to April. Again, Sri Lanka posted the highest reduction in the dispersion of its forecasts, the September standard deviation being 75% lower than that of April. The larger reduction in the spread of errors in the current-year forecasts suggests that information gathered between April and September benefits the current-year forecasts more than the next-year forecasts.

As a whole, the FPE increases from April to September. This is true for both current- and next-year forecasts. Although GDP growth forecasts are generally underpredicted (as shown by an FPE above 0.50, regardless of whether current- or next-year, and date of reporting), this underprediction becomes more pronounced when figures for the first half of the year are known. No obvious explanation exists for this.

Inflation

MAEs for the September release of inflation forecasts are smaller than in the April release. This is true irrespective of subregion and whether a current- or next-year forecast. Of the 12 DMCs evaluated, only India posted a slight increase in the September MAE of its next-year forecasts.

In general, additional information gathered between April and September helps the accuracy of the forecasts. The improvement, as measured by the reduction in MAE, is more pronounced in current- than next-year forecasts. A larger reduction of the MAE is observed for inflation forecasts than GDP growth forecasts. This may be because GDP is harder to predict, as it is determined by a host of factors and is a lower frequency variable than inflation.

4.1.3 Descriptive statistics for forecast errors, April and September issues of *ADO*, 2000–2006

	Mean absolute error (percentage points)		Standard deviation (percentage points)		Fraction of positive errors	
	April	Sep	April	Sep	April	Sep
			GDP growth			
Current-year forecast	**1.39**	**0.75**	**1.99**	**0.80**	**0.71**	**0.78**
East Asia	**1.51**	**0.81**	**2.16**	**0.77**	**0.64**	**0.82**
China, People's Rep. of	1.71	1.14	0.57	0.66	1.00	1.00
Hong Kong, China	2.19	1.03	2.62	0.66	0.71	1.00
Korea, Rep. of	0.73	0.63	1.03	0.73	0.43	0.71
Taipei,China	1.43	0.46	2.84	0.60	0.43	0.57
South Asia	**1.59**	**1.14**	**2.23**	**1.23**	**0.71**	**0.86**
India	1.51	1.30	1.92	1.62	0.57	0.71
Sri Lanka	1.66	0.92	2.67	0.31	0.86	1.00
Southeast Asia	**1.25**	**0.72**	**1.81**	**0.69**	**0.76**	**0.83**
Indonesia	0.69	0.71	0.72	0.69	0.86	0.86
Malaysia	1.56	0.60	2.34	0.64	0.71	0.71
Philippines	0.61	0.43	0.73	0.52	0.86	0.71
Singapore	2.73	1.24	3.61	1.05	0.57	0.86
Thailand	1.26	0.71	1.60	0.54	0.57	0.86
Viet Nam	0.63	0.61	0.30	0.45	1.00	1.00
Next-year forecast	**2.05**	**1.76**	**2.84**	**2.52**	**0.58**	**0.64**
East Asia	**2.47**	**2.33**	**3.22**	**3.30**	**0.54**	**0.64**
China, People's Rep. of	2.07	2.00	0.42	0.44	1.00	1.00
Hong Kong, China	3.96	3.53	4.66	5.11	0.57	0.57
Korea, Rep. of	1.83	1.76	2.47	2.26	0.29	0.57
Taipei,China	2.01	2.03	3.25	3.48	0.29	0.43
South Asia	**1.69**	**1.46**	**2.57**	**1.76**	**0.50**	**0.59**
India	1.79	2.07	2.18	2.30	0.57	0.57
Sri Lanka	1.60	0.60	3.00	0.76	0.43	0.60
Southeast Asia	**1.89**	**1.72**	**2.70**	**2.46**	**0.64**	**0.67**
Indonesia	1.17	0.69	1.38	0.77	0.57	0.71
Malaysia	2.41	2.41	3.63	3.58	0.43	0.71
Philippines	0.73	0.93	1.22	1.35	0.71	0.43
Singapore	4.43	3.91	5.21	4.59	0.57	0.71
Thailand	1.81	1.53	2.25	2.12	0.57	0.43
Viet Nam	0.76	0.87	0.44	0.39	1.00	1.00
			Inflation			
Current-year forecast	**1.35**	**0.63**	**1.95**	**1.01**	**0.35**	**0.27**
East Asia	**1.11**	**0.41**	**1.05**	**0.47**	**0.21**	**0.21**
China, People's Rep. of	1.24	0.53	1.14	0.60	0.29	0.29
Hong Kong, China	1.59	0.40	0.97	0.41	0.00	0.14
Korea, Rep. of	0.67	0.24	0.76	0.26	0.29	0.14
Taipei,China	0.94	0.46	0.96	0.61	0.29	0.29
South Asia	**1.89**	**1.03**	**2.81**	**1.53**	**0.57**	**0.44**
India	1.01	0.79	1.37	1.12	0.57	0.29
Sri Lanka	2.77	1.38	3.77	1.86	0.57	0.60
Southeast Asia	**1.34**	**0.80**	**1.94**	**1.23**	**0.36**	**0.26**
Indonesia	1.66	1.41	2.37	1.97	0.29	0.57
Malaysia	0.70	0.36	0.79	0.23	0.29	0.00
Philippines	1.39	0.89	1.49	1.10	0.29	0.29
Singapore	0.51	0.24	0.50	0.20	0.14	0.14
Thailand	0.74	0.39	0.88	0.53	0.57	0.43
Viet Nam	3.03	1.50	3.91	1.90	0.57	0.14
Next-year forecast	**2.25**	**1.83**	**3.13**	**2.42**	**0.45**	**0.44**
East Asia	**1.91**	**1.40**	**2.28**	**1.56**	**0.32**	**0.25**
China, People's Rep. of	1.87	1.63	2.01	1.70	0.14	0.14
Hong Kong, China	3.13	2.14	2.99	1.67	0.29	0.00
Korea, Rep. of	0.89	0.67	1.30	0.88	0.57	0.43
Taipei,China	1.74	1.17	1.85	1.27	0.29	0.43
South Asia	**2.34**	**2.03**	**3.53**	**2.49**	**0.71**	**0.69**
India	1.09	1.66	1.42	1.89	0.57	0.57
Sri Lanka	3.60	2.56	4.51	3.11	0.86	0.80
Southeast Asia	**2.45**	**2.04**	**3.28**	**2.75**	**0.45**	**0.50**
Indonesia	4.84	3.83	4.91	4.06	0.71	0.86
Malaysia	1.44	1.11	1.43	1.17	0.29	0.29
Philippines	1.93	1.59	2.41	1.87	0.57	0.43
Singapore	0.84	0.73	1.03	0.65	0.29	0.29
Thailand	1.77	1.54	2.07	1.79	0.43	0.57
Viet Nam	3.87	3.46	4.97	4.46	0.43	0.57

Source: Staff calculations.

Further, all the standard deviations of April current-year forecast errors are higher than September's. For September revisions to the current-year estimate, the standard deviations fall by 48%. Next-year forecast errors also see a reduction.

In terms of FPE, for both April and September, the majority of forecast errors are negative, i.e., they display a tendency for inflation forecasts to be too high. This proportion is about 65–73% for current-year forecasts, and about 55% for next-year forecasts.

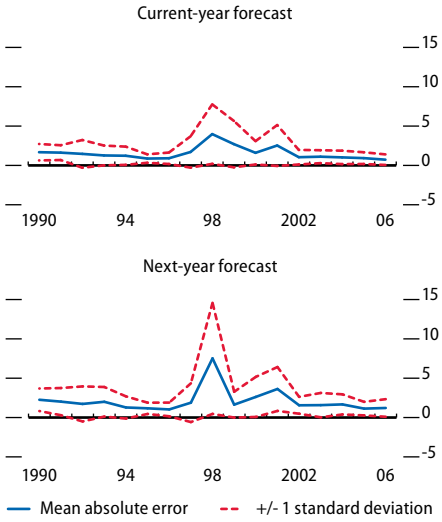
Accuracy of forecasting over time

GDP growth

Figure 4.1.1 plots the MAE of GDP growth forecasts over time. The MAE was estimated through a simple cross-sectional average of all DMCs' absolute forecast errors for each year. To ensure a similar number of DMCs across the years, only the forecasts in the April *ADO* were considered. The solid line refers to the MAE and the dashed lines to values of the absolute prediction error at less than and at more than one sample standard deviation, estimated for each year. A smaller gap between the solid line and dashed lines indicates more tightly distributed forecast errors.

Forecast accuracy for GDP growth appears to have gradually improved over time (if one ignores the sharp rise in forecast errors in the crisis years). Not only are forecast errors declining, but they have also been characterized by lower variance in recent years.

4.1.1 Mean absolute error of GDP growth forecasts, April issue of *ADO* (percentage points)



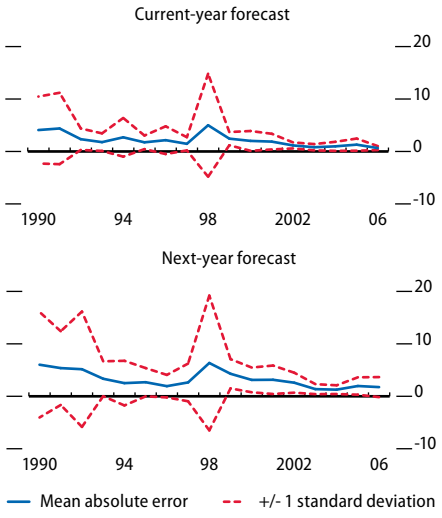
Source: Staff calculations.

Click here for figure data

Inflation

A similar exercise was undertaken for inflation. As shown in Figure 4.1.2, MAEs of current- and next-year forecasts have declined in recent years. This would indicate greater forecast accuracy after the crisis years, and even better than the quality of forecasts prior to the crisis. The trend of the RMSE also improves (Figure 4.1.3). For inflation, a large part of the improvement in overall forecast accuracy is due to the substantial decrease in the forecast errors for Bangladesh, PRC, Indonesia, Sri Lanka, and Viet Nam.

4.1.2 Mean absolute error of inflation forecasts, April issue of *ADO* (percentage points)



Source: Staff calculations.

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Improved forecast accuracy

The progress in forecast quality is attributable not only to learning effects but also to the gradual stability seen in the overall macroeconomic environment, and access to higher-quality data. Recent years in developing Asia have been characterized by stable growth, as well as lower average inflation. Improvements in national statistical systems in several DMCs have also increased timely access to more reliable macroeconomic data.

Growth and turning points

Earlier sections assessed the quality of forecasting by the *size* of prediction errors. This section assesses quality in terms of the accuracy of prediction about the *direction of change*. In the case of growth,

a good forecast should be able to discriminate between a positive change in growth (or acceleration) and a negative change in growth (or deceleration). This test is relevant as some short- to medium-term business decisions are influenced by expectations of whether the immediate macroeconomic outlook is better or worse than current conditions.

Pooling data across years and DMCs reveals that the April issue of *ADO* has correctly predicted the direction of current-year GDP growth forecasts for about 70% of the time since 1990; for next-year forecasts, the corresponding figure is 64%. These statements are true even if the crisis years are excluded from the evaluation. Accuracy of directional forecast tends to be negatively associated with the pace of growth (Figure 4.1.4).

The strength of a forecast to discriminate between an acceleration and a deceleration may also be measured by applying the Hansen-Kuiper's discriminant score (HK), defined here as: HK = A(g) – FA(g), where A(g) is the proportion of accelerations (including no change in growth) that have been correctly forecast to occur, while FA(g) is the proportion of decelerations that have been falsely forecast. It ranges between "-1" and "1." A score of 1 indicates perfect forecasting, while "-1" means that all forecasts are incorrect. Referring to Table 4.1.4, A(g) is computed as $A_R/(A_R+A_W)$ while FA(g) is estimated as $D_W/(D_W+D_R)$.

4.1.4 Contingency table for actual and predicted outcomes

		Actual	
		Acceleration	Deceleration
Predicted	Acceleration	A_R	D_W
	Deceleration	A_W	D_R

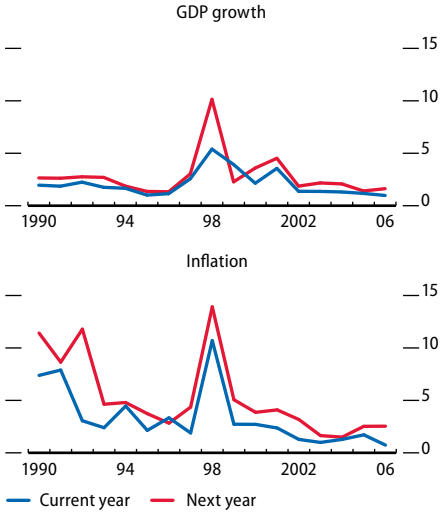
The HK has a desirable property: forecasts that uniformly predict only a single outcome, say a good event, will score zero, provided that there is at least one bad event. Thus, a forecast that predicts acceleration throughout will have an A(g) equal to 1, but also an FA(g) equal to 1, and thus an HK that is equal to 0. However, if events of only one kind occur and they are correctly predicted, the HK score will be 1. Results are shown in Table 4.1.5. Not surprisingly, current-year forecasts perform better on the HK test than next-year forecasts. Except for South Asia (i.e., India and Sri Lanka), September forecasts do better than those in April. Generally, predictions are best for East Asia. Although the accuracy of the

4.1.5 Hansen-Kuiper's discriminant score, GDP growth, April and September issues of *ADO*

	All	East Asia	South Asia	Southeast Asia
April issue				
Current year: 1990–2006, 2000–2006	0.45, 0.48	0.59, 0.60	0.50, 0.25	0.34, 0.47
Next year: 1990–2006, 2000–2006	0.28, 0.27	0.32, 0.27	0.34, 0.25	0.22, 0.26
September issue				
Current year: 2000–2006	0.63	0.72	0.38	0.64
Next year: 2000–2006	0.28	0.30	0.13	0.32

Source: Staff calculations.

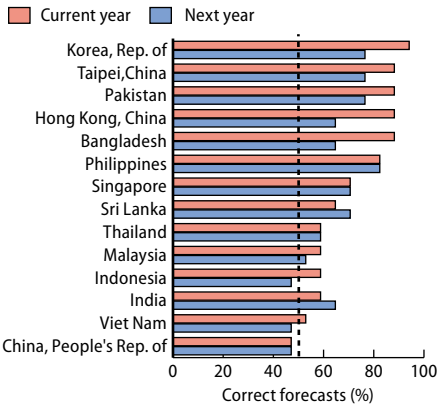
4.1.3 Root-mean-square error of GDP growth and inflation forecasts, April issue of *ADO* (percentage points)



Source: Staff calculations.

Click here for figure data

4.1.4 Accuracy of direction of GDP growth, April issue of *ADO* (percentage points), 1990–2006



Source: Staff calculations.

Click here for figure data

direction for predicted GDP growth is relatively weak for the PRC, it is quite good for Hong Kong, China; Republic of Korea; and Taipei,China.

Using a contingency table, tests of association between predicted and actual growth can be conducted. Table 4.1.6 reports two types of measures—the Pearson chi-square test and phi coefficient—applied on GDP growth current- and next-year forecasts over the period 1990–2006. Results of the chi-square test reject the null hypothesis of no association between predicted and actual growth. To examine the type and degree of association, the phi coefficient is used here. It is a special case of the correlation coefficient applied to binary variables, ranging from +1 (positive association) to -1 (negative association). The phi coefficients again show a stronger positive correlation between forecast and actual growth in current- than next-year forecasts.

The current-year phi coefficient (not shown) for East Asia, at 0.60, is also higher than those for South Asia (0.50) and Southeast Asia (0.35), suggesting better forecast quality in East Asia (at least on this measure).

4.1.6 Tests of association, GDP growth, April issue of *ADO*, 1990–2006

		Actual					
		Current-year			Next-year		
		Accel.	Decel.	Total	Accel.	Decel.	Total
Predicted	Acceleration	82	50	132	86	46	132
	Deceleration	18	88	106	39	67	106
	Total	100	138	238	125	113	238
	Pearson chi-square			49.17			18.96
	P-value for Pearson chi-square			0.00			0.00
	Phi coefficient			0.45			0.28

Source: Staff calculations.

ADO and Consensus Economics forecasts

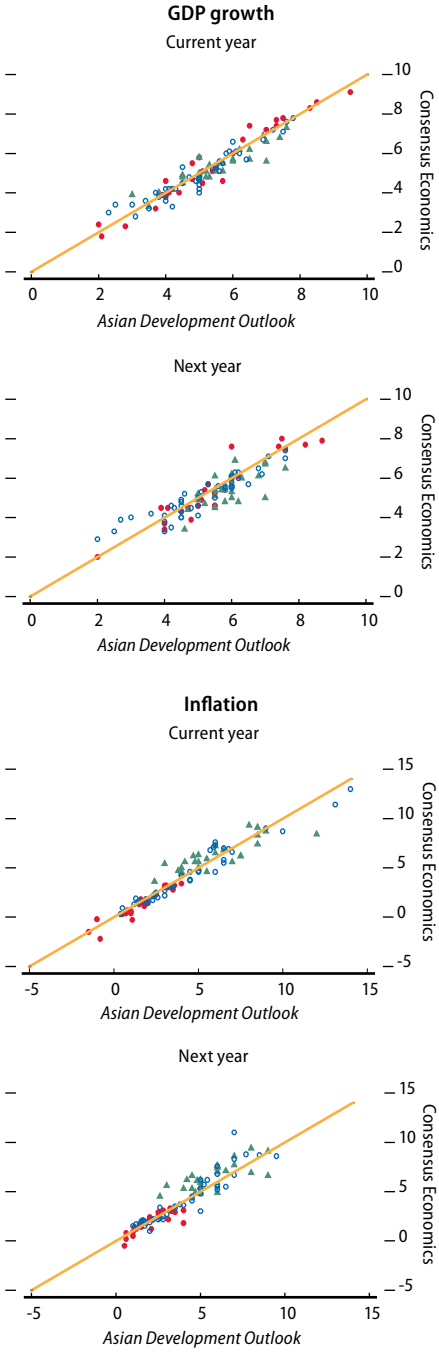
A comparison of the April issue of *ADO* and Consensus Economics forecast errors suggests that *ADO* has a better track record on growth (especially in South Asia) but Consensus Economics performs slightly better on inflation (particularly East Asia and Southeast Asia; Table 4.1.7). However, there is little statistical significance in these differences, and it is not possible to trace directly the reasons for them. Consensus Economics forecasts seem to fare better for DMCs with deeper financial markets and for monetary rather than real variables.

The apparent lack of significant differences between *ADO* and Consensus Economics forecasts may be observed from Figure 4.1.5. Most of the scatter points lie very close to the 45° line, showing a fairly high level of correlation between the two sets of forecasts. This is most evident in current-year GDP forecasts.

Conclusions

Even with the expanded dataset (from nine to 14 DMCs) and use of additional statistical tests, findings similar to those in *ADO 2006 Update*

4.1.5 April *ADO* and Consensus Economics forecasts (%), 2000–2006



Sources: Consensus Economics Inc., *Asia Pacific Consensus Forecasts*, various years; staff calculations.

Click here for figure data

4.1.7 Average differences between April *ADO* and Consensus Economics forecasts (percentage points), 2000–2006

Indicator	All		East Asia		South Asia		Southeast Asia	
Growth								
Average difference in mean absolute errors								
Current year: F_{ADO} - $F_{Consensus}$	-0.05	(-0.74)	0.12	(0.76)	-0.25	(-3.29)***	-0.01	(-0.17)
Next year: F_{ADO} - $F_{Consensus}$	-0.00	(-0.00)	0.16	(1.41)	-0.14	(-1.30)	0.00	(0.03)
Inflation								
Average difference in mean absolute errors								
Current year: F_{ADO} - $F_{Consensus}$	0.07	(0.95)	0.27	(3.08)***	-0.43	(-3.04)**	0.26	(2.64)**
Next year: F_{ADO} - $F_{Consensus}$	0.02	(0.17)	0.23	(1.85)*	-0.17	(-0.70)	0.03	(0.20)

Note: ***, **, and * indicate that the average differences are significant at 1%, 5%, and 10%, respectively. A negative coefficient means that the *ADO* forecast has a lower mean absolute error than the Consensus Economics forecast. Values in parentheses are t-statistics.

Source: Staff calculations.

emerge. First, there is a tendency for *ADO* to underpredict growth and overpredict inflation. Second, forecast accuracy has improved over time.

Other points are salient. *ADO* has a fairly high level of accuracy, not only in terms of predicting the magnitude of change, but also in terms of forecasting the direction of change. Still, forecast accuracy tends to vary across DMCs as well as subregions. Accuracy has also been—and is likely to remain—susceptible to shocks.

Endnote

1 The main *ADO* appears in March or April, and the *Update* in August or September. For the sake of simplicity, April and September are used.

Estimating subregional and regional growth for developing Asia

In estimating subregional (e.g., East Asia) and regional (i.e., developing Asia) gross domestic product (GDP) growth, it is necessary to use weights to properly account for the contribution of countries to overall regional performance. In this aggregation, country income measured in domestic currency must be converted to common units. A choice has to be made whether to use market exchange rates; some kind of adjusted exchange rate, e.g., the World Bank Atlas method; or purchasing power parity (PPP) rates.

In its early publications, *Asian Development Outlook* derived its subregional and regional averages using current US dollar exchange rates. But after the financial crisis in 1997–98 as devaluations of currencies continued, *ADO* shifted to the Atlas method to smoothen the abrupt changes associated with the rapid movement of Asian currencies.

This technical note explains the two most frequently used weighting systems in cross-country comparisons of economic size and growth—the World Bank Atlas method and the PPP approach—and illustrates how their use can influence the calculation of averages. These measures are usually applied to the gross national income (GNI) of economies, so that the rankings or the relative economic size of economies reflect all facets of income earned domestically and abroad.

World Bank Atlas method

While using current market exchange rates is straightforward, it is an unsatisfactory solution for international comparisons because of possible volatility of market exchange rates and cross-country inflation rates. For instance, their use will depress estimates of those economies experiencing large depreciations even though domestic purchasing power may change by much less. The Atlas method reduces these fluctuations and modulates impacts on estimates of economic size and growth. The World Bank's official estimates of countries' relative economic sizes are based on GNI, which is converted to US dollars, using the Atlas method.

The Atlas conversion factor (ACF) is the average of a country's exchange rate for a given year and its exchange rates for the 2 preceding years, adjusted for the difference between the rate of inflation in the country and the G5 economies.[1] A country's inflation rate is measured by the change in its GDP deflator, while that for the G5, also called "international" inflation, is measured by the change in their special drawing rights (SDR) deflators.

The SDR deflator is calculated as the weighted average of the G5 economies' GDP deflators in SDR units. Country deflators are first expressed in SDR units with each country's SDR weight used for

aggregation. The SDR deflator is then converted to US dollars using the $/SDR Atlas conversion factor (the simple average of the actual $/SDR exchange rate for year *t*, and the inflation-adjusted $/SDR exchange rates for years *t-1* and *t-2*).

The ACF is then applied to a country's GNI to get the GNI in US dollars. The ACF, e^*, for year *t* is calculated as follows:

$$e_t^* = \frac{1}{3}\left[e_{t-2}\left(\frac{p_t}{p_{t-2}} / \frac{p_t^{S\$}}{p_{t-2}^{S\$}} \right) + e_{t-1}\left(\frac{p_t}{p_{t-1}} / \frac{p_t^{S\$}}{p_{t-1}^{S\$}} \right) + e_t \right]$$

where, e_t = annual exchange rate or domestic currency per dollar, p_t = the GDP deflator, and $p_t^{S\$}$ = the SDR deflator in dollars.

This formula implies that if domestic and international price deflators move in perfect synchronization, the Atlas deflator is just the unweighted average of the current and past 2 years' exchange rates. However, if domestic inflation is faster than international inflation over comparable periods, the weighted average of the historical market exchange rates is raised to reflect the fact that there has been an erosion of domestic purchasing power relative to the international benchmark. A higher ACF reduces a country's GNI in US dollars; a lower ACF, reflecting higher international inflation or an appreciation of the domestic currency relative to the dollar, increases it.

Taking the ratio of a country's GNI in US dollars to total regional GNI gives the country's weight, w_i. The weighted GDP growth for the region or subregion is then computed using the following formula:

$$g_j = \sum_{i \in j} g_i \left[\frac{w_i}{\sum_{k \in j} w_k} \right]$$

where, g_i = growth rate of country *i*, *k* = subregion, and *j* = region.
The World Bank publishes Atlas-based GNI data on a regular basis. For most countries, the GNI data can be downloaded from the *World Development Indicators* online database.

Purchasing power parity method

An alternative approach in converting income from national currencies into a common currency is the PPP method. This is useful for aggregating real expenditures into regional and subregional totals because it eliminates the relative price distortions between traded and nontraded goods inherent in conversions using market exchange rates.
PPP is defined as the number of units of a country's currency that is required to buy the same amount of goods and services in another country. PPPs are expressed in terms of a "numeraire" currency, usually US dollars and presented either in terms of values expressed in the common currency or as an index with the common currency equal to 100. The choice of a numeraire currency does not affect the relative parities of volume and prices across economies.

PPP numbers are not available on a yearly basis, because special

and benchmark International Comparison Program price surveys are only conducted at about 3- to 5-year intervals, depending on the region. PPP estimates for nonbenchmark years are therefore extrapolated or estimated, based on the latest benchmark year.

As with Atlas-based GNI data, the World Bank publishes PPP-based GNI estimates through the *World Development Indicators* online database.

Comparing economic size and regional growth estimates

Atlas- and PPP-converted GNIs provide better estimates of economic size and computations of growth than do market exchange rates because of the volatility inherent in exchange rates and the changes in the relative price levels between countries. The Atlas method damps variability caused by fluctuations in exchange rates, while the PPP method eliminates the effects of differences and changes in relative price levels. Though better conversion factors than simple market exchange rates, they are not perfect.

For the Atlas method, results may still be distorted if exchange rates change rapidly. The PPP method, on the other hand, is based on surveys, hence subject to sampling errors and estimation problems, particularly on services that may have a large nonmarket component. PPP estimates for nonbenchmark years use the nearest sample period, and so may not be reflective of the actual PPP for the year. For countries not covered in PPP surveys, estimates are imputed using statistical models, and as such are prone to error.

The GNI of developing countries measured in PPP terms will generally exceed their GNI measured using the Atlas method, reflecting productivity differentials between high- and low-income countries. In a high-productivity country, high wages lead to high prices of services and other nontraded goods, whereas in a low-productivity country, low wages produce low prices. The low prices of nontraded goods in developing countries boost GNI in PPP terms, but not using the Atlas conversion factors.

4.2.1 Top 10 economies based on GNI shares (% of total regional GNI), 2006

PPP method		Atlas method	
China, People's Rep. of	50.6	China, People's Rep. of	43.6
India	21.4	India	15.3
Korea, Rep. of	6.1	Korea, Rep. of	14.7
Indonesia	4.7	Indonesia	5.4
Thailand	3.1	Hong Kong, China	3.7
Philippines	2.6	Thailand	3.4
Pakistan	2.1	Malaysia	2.4
Bangladesh	1.8	Singapore	2.3
Malaysia	1.5	Philippines	2.1
Viet Nam	1.4	Pakistan	2.1
Total	95.3	Total	95.0

Note: PPP estimates exclude Afghanistan; Bhutan; Cook Islands; Maldives; Marshall Islands; Palau; Taipei,China; Timor-Leste; and Tuvalu. Atlas estimates here exclude Taipei,China.

Sources: World Bank, *World Development Indicators* online database; *Asian Development Outlook* database.

Economic size

Comparing GNI data based on the Atlas and PPP methods confirms the difference in rankings. Table 4.2.1 shows the top 10 economies in terms of size (excluding Taipei,China), for each method. The People's Republic of China (PRC), India, Republic of Korea (Korea), and Indonesia are in the top four spots for both approaches, but rankings for Hong Kong, China; Philippines; and Thailand are more sensitive. Other country differences are also apparent.

Subregional and regional growth

These variations in weights result in different estimates of GDP growth for regional and subregional aggregates (Table 4.2.2). Growth estimates are higher under PPP because the PRC and India have higher PPP shares than Atlas shares and their growth rates are among the fastest in the region (Figure 4.2.1). Estimated regional growth in 2006, excluding Taipei,China, was 9.4% in PPP terms compared with only 8.5% using the Atlas method. (This difference is not sensitive to the inclusion of Taipei,China in the Atlas calculations.)

At the subregional level, the most significant differences are for East Asia. This is because of the larger weight given to rapidly growing PRC and a reduction in the weight for Korea, where growth is moderate.

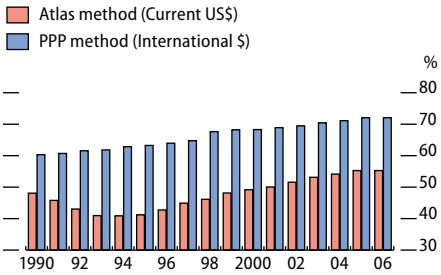
4.2.2 Subregional and regional GDP growth (%)

	2002	2003	2004	2005	2006
Atlas method (current $)					
Central Asia	8.7	9.4	9.8	11.1	12.4
East Asia	7.5	7.3	8.4	8.3	9.0
South Asia	3.7	7.8	7.4	8.7	8.8
Southeast Asia	4.8	5.3	6.4	5.6	6.0
The Pacific	0.4	1.8	3.6	2.6	2.6
Developing Asia	6.4	7.1	7.9	8.0	8.5
PPP method (current international $)					
Central Asia	8.6	9.1	9.6	11.3	12.7
East Asia	8.6	9.0	9.5	9.7	10.4
South Asia	3.7	7.9	7.4	8.7	8.9
Southeast Asia	4.9	5.6	6.3	5.6	5.9
The Pacific	0.7	0.7	3.2	2.7	2.2
Developing Asia	6.7	8.2	8.4	8.9	9.4

Note: PPP estimates exclude Afghanistan; Bhutan; Cook Islands; Maldives; Marshall Islands; Palau; Taipei,China; Timor-Leste; and Tuvalu. Atlas estimates here include Taipei,China.

Sources: World Bank, *World Development Indicators* online database; *Asian Development Outlook* database.

4.2.1 Shares of PRC and India to total GNI



Source: World Bank, *World Development Indicators* online database.

Click here for figure data

Conclusions

The differences between the Atlas and PPP methods influence estimates of economic size and calculations of subregional and regional growth. The Atlas method smoothens fluctuations in income caused by changes in exchange rates, while the PPP method eliminates the effects of differences and changes in the relative price levels of goods and services.

In these growth computations, *ADO* uses Atlas-based GNI weights because the factors used in the calculation of country GNIs are more

timely, continuous, and less subject to statistical problems in aggregation procedures. With the PRC and India dominating overall GNI shares in PPP terms, the estimated growth for the region would be higher with the PPP than Atlas method.

Endnote

1 Since 2001, the G5 economies have comprised the euro zone (superseding two previous members, France and Germany), Japan, United Kingdom, and United States.

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Statistical appendix

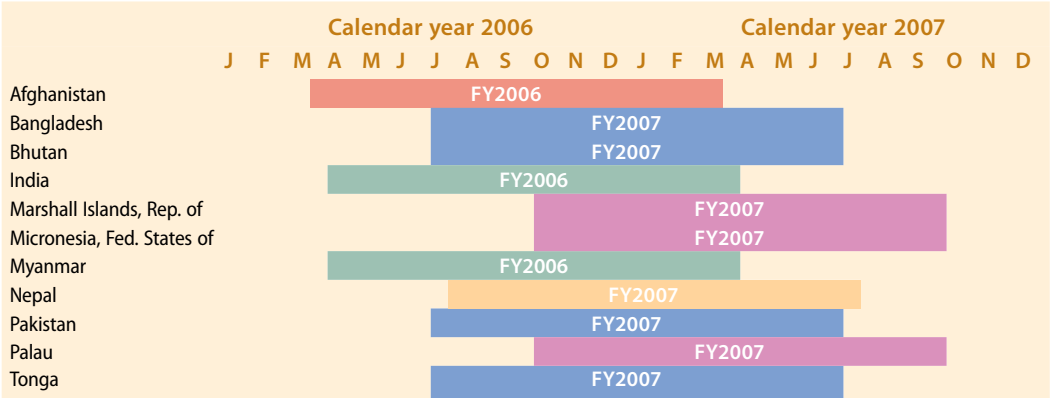
Statistical notes and tables

The statistical appendix presents three selected economic indicators for 43 developing member countries (DMCs) of the Asian Development Bank (ADB). These tables are gross domestic product (GDP) growth, inflation, and current account balance as a percentage of GDP. The DMCs are grouped into five subregions: Central Asia, East Asia, South Asia, Southeast Asia, and the Pacific.

These tables contain historical data from 2004 to 2006 and forecasts for 2007 to 2008. *Update* forecasts are compared with forecasts provided in *Asian Development Outlook 2007* (*ADO 2007*). For countries where *Update* forecasts are not available, projections are from *ADO 2007*. As much as possible, data were standardized to allow comparability over time and across DMCs. However, limitations exist because of differences in statistical methodology, definitions, coverage, and practices. A discussion of the sources, definitions, scope, and nature of data in the tables, as well as the methodology for the computation of regional and subregional averages/totals, follows.

Historical data are obtained from official sources, statistical publications, secondary publications, other working papers, and documents of ADB, International Monetary Fund (IMF), and World Bank. Projections for 2007 and 2008 are generally staff estimates, although for a few countries projections are in accord with government economic programs agreed with IMF. Data in the tables are reported either on a calendar year or fiscal year basis. The DMCs that record most of their accounts on a calendar year basis are: Armenia; Azerbaijan; Hong Kong, China; Kazakhstan; Kyrgyz Republic; Lao People's Democratic Republic (Lao PDR); Maldives; Samoa; Sri Lanka; Taipei,China; Tajikistan; Thailand; Democratic Republic of Timor-Leste; and Uzbekistan. India, Palau, Marshall Islands, and Tonga report balance-of-payments data on a fiscal year basis.

Regional and subregional averages for DMCs are provided for the



three tables. Data for Myanmar and Nauru are excluded from the computation of subregional averages due to measurement problems. Where there are missing data for a given year, regional and subregional averages are computed on the basis of available information only. For these tables, levels of gross national income (GNI) in current US$ using the World Bank Atlas method are used as weights to calculate the subregional and regional averages.

The GNI data, in current US$, were obtained from the World Bank Group *World Development Indicators* online database. The same weights used in *ADO 2007* are applied in computing regional and subregional averages. The GNI data, in current US$, for Cook Islands; Taipei,China; and Tuvalu are unavailable. For these economies, GNI data are estimated. The tables are now reviewed in more detail.

Table A1: Growth rate of GDP (% per year). This shows annual growth rates of GDP valued at constant market prices, factor costs, or basic prices. GDP at market prices is the aggregation of the value added of all resident producers at producers' prices including taxes less subsidies on imports plus all nondeductible value-added or similar taxes. Factor cost measures differ from market price measures in that they exclude taxes on production and include subsidies. Basic price valuation is the factor cost plus some taxes on production, such as property and payroll taxes, and less some subsidies, such as labor-related subsidies but not product-related subsidies. Most DMCs use constant market price valuation. South Asian countries predominantly use constant factor costs, including India, Nepal, Pakistan, and Sri Lanka, while the Maldives' GDP valuation is at basic prices. The series for Fiji Islands also employ constant factor cost valuation. For Hong Kong, China, the computation of real GDP is based on volume indexes and that for Timor-Leste on non-oil GDP. Growth forecasts for Cook Islands, Papua New Guinea, Samoa, Tonga, and Vanuatu adopt official government projections. Meanwhile, the series starting 2001 for Nepal has been revised to reflect a change in definition. Consumption of nonprofit institutions is now included in total consumption.

Table A2: Inflation (% per year). Data on inflation rates represent period averages. Except for India, which reports the wholesale price index, and Solomon Islands, which uses the retail price index, annual inflation rates presented are based on the consumer price index. The consumer price indexes of the following countries are for a given city or group of consumers only: Cambodia is for Phnom Penh, Solomon Islands is for Honiara, Republic of Marshall Islands is for Majuro and Ebeye, Afghanistan is for Kabul, and Nepal is for urban consumers.

Table A3: Current account balance (% of GDP). The values on the current account balance, which is the sum of the balance of trade for merchandise, net trade in services and factor income, and net transfers, are divided by GDP at current prices in US$. The series for Pakistan, Mongolia, Cambodia, Lao PDR, and Viet Nam excludes official transfers. In the case of Bhutan, GDP for the previous calendar year is used as the denominator.

Table A1 Growth rate of GDP (% per year)

Subregion/Economy	2004	2005	2006	2007		2008	
				ADO 2007	*Update*	*ADO 2007*	*Update*
Central Asia	9.8	11.1	12.4	10.3	11.1	9.4	10.1
Armenia	10.5	14.0	13.4	10.0	11.0	9.0	9.0
Azerbaijan	10.2	26.4	32.0	25.0	27.0	17.0	20.0
Kazakhstan	9.6	9.7	10.6	8.6	9.0	8.9	8.9
Kyrgyz Republic	7.0	-0.2	2.7	4.0	6.0	5.0	7.0
Tajikistan	10.6	6.7	7.0	7.5	7.5	7.1	8.0
Turkmenistan	14.7	9.0	9.0	8.5	10.0	8.5	10.0
Uzbekistan	7.7	7.0	7.2	7.4	8.0	7.1	7.5
East Asia	8.4	8.3	9.0	8.0	8.9	8.0	8.7
China, People's Rep. of	10.1	10.4	11.1	10.0	11.2	9.8	10.8
Hong Kong, China	8.6	7.5	6.9	5.4	6.0	5.2	5.4
Korea, Rep. of	4.7	4.2	5.0	4.5	4.6	4.8	5.0
Mongolia	10.8	7.1	8.4	7.0	8.0	7.0	8.0
Taipei,China	6.2	4.1	4.7	4.3	4.6	4.5	4.5
South Asia	7.4	8.7	8.8	7.7	8.1	8.0	8.1
Afghanistan	8.0	14.0	7.5	10.0	13.0	10.0	8.4
Bangladesh	6.3	6.0	6.6	6.5	6.5	7.0	6.5
Bhutan	6.8	6.5	9.0	18.0	18.0	10.0	10.0
India	7.5	9.0	9.4	8.0	8.5	8.3	8.5
Maldives	9.5	-4.6	19.1	12.1	7.3	8.0	8.0
Nepal	4.4	2.9	3.1	2.8	2.5	2.8	2.8
Pakistan	7.5	9.0	6.6	6.8	7.0	6.5	6.5
Sri Lanka	5.4	6.0	7.4	6.1	6.1	6.0	6.0
Southeast Asia	6.4	5.6	6.0	5.6	6.1	5.9	6.1
Cambodia	10.0	13.5	10.8	9.5	9.2	9.0	8.0
Indonesia	5.0	5.7	5.5	6.0	6.2	6.3	6.4
Lao People's Dem. Rep.	6.9	7.2	7.3	6.8	6.8	6.5	6.5
Malaysia	6.8	5.0	5.9	5.4	5.6	5.7	5.7
Myanmar	13.6	13.2	-	-	-	-	-
Philippines	6.4	4.9	5.4	5.4	6.6	5.7	6.0
Singapore	8.8	6.6	7.9	6.0	7.5	5.5	6.0
Thailand	6.3	4.5	5.0	4.0	4.0	5.0	5.0
Viet Nam	7.8	8.4	8.2	8.3	8.3	8.5	8.5
The Pacific	3.6	2.6	2.6	4.5	3.5	2.8	3.2
Cook Islands	4.3	0.1	0.8	3.2	2.5	3.9	3.5
Fiji Islands	5.3	0.7	3.4	-2.3	-3.1	1.3	1.5
Kiribati	2.3	2.5	1.1	-	1.0	-	1.0
Marshall Islands, Rep. of	5.6	1.7	1.3	3.5	2.5	-	-
Micronesia, Fed. States of	-4.3	1.5	-0.7	1.0	1.0	1.5	1.5
Nauru	-	-	-	-	-	-	-
Palau, Rep. of	4.9	5.5	5.7	5.5	5.5	4.8	4.8
Papua New Guinea	2.9	3.4	2.6	4.5	5.2	3.5	4.5
Samoa	3.4	5.2	2.6	3.1	3.1	-	-
Solomon Islands	8.0	5.0	6.1	5.0	6.3	4.0	4.0
Timor-Leste, Dem. Rep. of	0.3	2.3	-1.6	32.1	22.0	3.5	3.5
Tonga	1.4	2.3	0.7	0.0	-3.5	2.9	0.1
Tuvalu	4.0	2.0	3.0	2.5	2.5	2.5	2.5
Vanuatu	5.5	6.8	5.5	4.7	4.7	4.6	4.6
Average	7.9	8.0	8.5	7.6	8.3	7.7	8.2

- = data not available.

Table A2 Inflation (% per year)

Subregion/Economy	2004	2005	2006	2007		2008	
				ADO 2007	*Update*	*ADO 2007*	*Update*
Central Asia	5.8	7.7	7.9	8.6	9.7	7.9	9.1
Armenia	7.0	0.6	2.9	4.0	4.0	4.0	4.0
Azerbaijan	6.7	9.6	8.3	14.0	18.0	10.0	15.0
Kazakhstan	6.9	7.6	8.6	8.0	8.5	8.0	8.3
Kyrgyz Republic	4.0	4.4	5.6	5.0	5.0	5.0	5.0
Tajikistan	7.2	7.3	10.1	7.0	11.4	5.0	9.2
Turkmenistan	5.9	10.7	8.2	8.0	9.0	8.0	9.0
Uzbekistan	1.6	7.8	6.8	9.0	10.0	8.2	9.5
East Asia	3.4	2.0	1.6	1.9	3.5	2.2	3.3
China, People's Rep. of	3.9	1.8	1.5	1.8	4.2	2.2	3.8
Hong Kong, China	-0.4	1.0	2.0	1.6	1.7	2.3	2.5
Korea, Rep. of	3.6	2.8	2.2	2.4	2.5	2.6	2.6
Mongolia	8.2	12.7	5.1	6.0	7.5	6.0	7.5
Taipei,China	1.6	2.3	0.6	1.6	1.6	1.5	1.5
South Asia	6.3	5.3	5.9	5.5	5.7	5.3	5.4
Afghanistan	13.2	12.3	5.1	5.0	5.9	5.0	5.0
Bangladesh	5.8	6.5	7.2	7.0	7.2	6.0	7.0
Bhutan	3.6	4.8	4.9	5.0	5.0	5.0	5.0
India	6.4	4.4	5.4	5.0	5.0	5.0	5.0
Maldives	6.4	3.3	3.5	4.0	4.0	4.0	4.0
Nepal	4.0	4.5	8.0	5.3	6.4	5.4	5.4
Pakistan	4.6	9.3	7.9	7.0	7.8	6.5	6.5
Sri Lanka	7.9	10.6	9.6	10.0	14.5	9.0	10.0
Southeast Asia	4.2	6.3	7.1	4.2	3.8	4.0	3.8
Cambodia	3.8	5.9	4.7	4.2	4.2	3.5	3.5
Indonesia	6.1	10.5	13.1	6.2	6.3	6.1	6.0
Lao People's Dem. Rep.	10.5	7.2	6.6	5.0	5.0	5.2	5.2
Malaysia	1.4	3.1	3.6	2.7	2.5	2.7	2.5
Myanmar	3.8	10.7	-	-	-	-	-
Philippines	6.0	7.6	6.2	4.8	2.9	5.0	3.5
Singapore	1.7	0.5	1.0	1.6	1.2	1.0	1.2
Thailand	2.8	4.5	4.6	2.5	2.0	2.5	2.5
Viet Nam	7.8	8.3	7.5	6.8	7.8	6.3	6.8
The Pacific	3.3	2.4	3.2	3.5	4.7	3.3	3.2
Cook Islands	0.9	2.4	3.4	2.8	2.8	2.0	2.0
Fiji Islands	2.8	2.4	2.5	3.0	4.1	3.0	3.0
Kiribati	-1.0	-0.3	-1.5	-	-	-	-
Marshall Islands, Rep. of	2.2	4.4	4.3	2.4	3.1	2.4	2.4
Micronesia, Fed. States of	2.3	4.2	4.7	3.0	3.0	-	-
Nauru	-	-	-	-	-	-	-
Palau, Rep. of	5.0	3.9	4.4	3.9	3.9	-	-
Papua New Guinea	2.2	1.7	2.9	3.0	4.8	3.0	2.9
Samoa	16.3	1.9	3.8	3.6	5.0	-	-
Solomon Islands	6.9	7.2	8.0	8.0	8.0	7.5	7.5
Timor-Leste, Dem. Rep. of	0.8	1.8	4.2	5.0	8.0	4.0	4.0
Tonga	11.8	10.0	7.2	10.0	5.0	9.0	5.0
Tuvalu	2.8	3.2	3.8	3.0	3.0	3.0	3.0
Vanuatu	3.2	0.6	2.6	2.5	2.5	2.5	2.5
Average	4.0	3.4	3.3	3.0	4.0	3.2	3.8

- = data not available.

Table A3 Current account balance (% of GDP)

Subregion/Economy	2004	2005	2006	2007		2008	
				ADO 2007	*Update*	*ADO 2007*	*Update*
Central Asia	-1.6	1.5	4.7	3.2	3.5	3.3	3.6
Armenia	-4.5	-3.9	-3.8	-5.0	-4.7	-5.0	-5.0
Azerbaijan	-29.8	1.3	18.4	20.5	20.5	24.6	24.8
Kazakhstan	0.8	-1.8	-2.2	-1.6	-1.6	-2.1	-2.1
Kyrgyz Republic	-3.4	-8.3	-23.8	-12.2	-12.5	-10.7	-10.8
Tajikistan	-2.7	-0.8	-0.8	-4.8	-15.2	-5.0	-15.3
Turkmenistan	0.6	5.1	15.3	7.4	11.7	6.3	11.7
Uzbekistan	10.2	14.3	19.5	10.0	11.0	9.2	10.0
East Asia	4.2	6.0	7.4	6.8	8.2	6.9	7.9
China, People's Rep. of	3.6	7.2	9.4	8.8	10.9	8.9	10.5
Hong Kong, China	9.5	11.4	10.8	9.5	9.5	11.5	11.5
Korea, Rep. of	4.1	1.9	0.7	0.1	0.6	0.1	0.1
Mongolia	3.9	4.0	8.0	2.0	2.0	2.0	2.0
Taipei,China	5.6	4.5	6.8	6.7	6.7	6.5	6.5
South Asia	-0.2	-1.2	-1.4	-2.2	-1.9	-2.2	-2.1
Afghanistan	1.8	0.6	-1.2	-4.8	-2.5	-5.7	-3.6
Bangladesh	0.3	-0.9	1.3	1.0	1.4	0.2	1.0
Bhutan	-11.6	-29.7	-2.4	3.0	3.0	3.0	3.0
India	-0.4	-1.1	-1.1	-2.2	-1.6	-2.2	-1.9
Maldives	-15.8	-36.0	-39.8	-60.9	-37.7	-15.0	-15.0
Nepal	2.7	2.0	2.2	1.0	0.5	1.0	1.0
Pakistan	1.3	-1.6	-4.5	-4.5	-5.2	-3.9	-5.5
Sri Lanka	-3.2	-2.8	-4.9	-2.5	-3.5	-2.4	-3.3
Southeast Asia	5.1	4.7	7.8	6.1	7.0	5.6	6.0
Cambodia	-8.2	-9.4	-7.2	-8.6	-7.2	-10.1	-8.7
Indonesia	0.6	0.1	2.7	1.0	1.4	0.7	0.7
Lao People's Dem. Rep.	-7.5	-6.7	1.2	-15.3	-15.3	-13.1	-13.1
Malaysia	12.1	14.6	16.3	10.7	11.9	10.2	11.6
Myanmar	0.0	-	-	-	-	-	-
Philippines	1.9	2.0	4.3	3.2	5.4	2.9	5.2
Singapore	20.1	24.5	27.5	27.0	28.5	27.0	27.0
Thailand	1.7	-4.5	1.6	1.3	3.0	-0.7	0.5
Viet Nam	-2.1	-1.0	-0.5	0.2	-5.0	1.3	-4.7
The Pacific	-0.9	6.2	4.9	-1.2	7.3	2.0	2.3
Cook Islands	6.6	14.6	21.9	14.9	23.4	15.1	23.6
Fiji Islands	-13.1	-12.3	-20.2	-12.6	-24.0	-	-
Kiribati	-19.5	-58.0	-62.4	-	-	-	-
Marshall Islands, Rep. of	-3.1	-5.0	-3.8	-	-	-	-
Micronesia, Fed. States of	-18.1	-15.4	-12.7	-	-	-	-
Nauru	-	-	-	-	-	-	-
Palau, Rep. of	9.6	10.6	2.5	-	-	-	-
Papua New Guinea	3.1	12.3	7.3	7.9	7.9	2.3	2.3
Samoa	-5.6	-5.6	-5.9	-5.2	-5.1	-	-
Solomon Islands	25.3	0.8	3.2	-15.9	-15.9	-10.4	-10.4
Timor-Leste, Dem. Rep. of	30.4	83.5	115.5	-	139.6	-	-
Tonga	4.0	-2.9	-6.8	-5.2	-5.0	-	-
Tuvalu	-	-	-	-	-	-	-
Vanuatu	-4.7	-10.4	-	-	-	-	-
Average	3.5	4.4	5.8	5.0	6.1	5.0	5.7

- = data not available.