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# WORLD ECONOMIC OUTLOOK
## April 2004

Advancing Structural Reforms

International Monetary Fund

# CHAPTER I ECONOMIC PROSPECTS AND POLICY ISSUES

*With the global recovery strengthening and broadening, the IMF staff's baseline forecast has been revised upward significantly, with global GDP growth in 2004 and 2005 now projected at about 4½ percent (Figure 1.1, Table 1.1). With global trade rising sharply, financial markets buoyant, and the U.S. economy rebounding, the balance of risks has significantly improved. In the short run it is possible that global growth may be higher than projected, although geopolitical risks—including terrorist attacks—and oil prices have become increasing concerns. But significant challenges and risks remain, including achieving an orderly resolution of global imbalances, notably the large U.S. current account deficit and surpluses elsewhere; addressing difficult medium-term fiscal situations in many industrial and emerging market economies; and managing the eventual transition to higher interest rates. While policymakers need to continue to ensure that the recovery is sustained, the focus increasingly needs to shift toward these issues, including through a credible and cooperative approach to addressing global imbalances, and to rebuilding room for policy maneuver to deal with unexpected shocks. In both advanced and developing countries it will be essential to take advantage of the recovery to press ahead with the structural reforms needed to improve growth potential, flexibility, and resilience, and to resist protectionist pressures.*

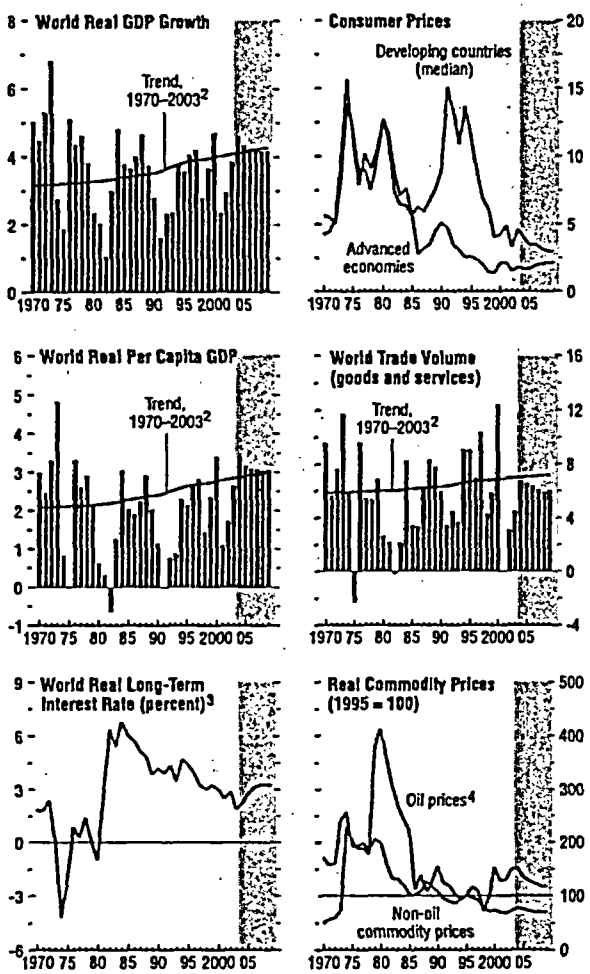
Since the last *World Economic Outlook* in September 2003, the global recovery has strengthened and broadened. Industrial production has picked up sharply, accompanied by a strong rebound in global trade (Figure 1.2); business, and to a lesser extent consumer, confidence has strengthened; and investment growth—essential to sustain the recovery—has turned solidly positive in almost all regions. In the second half of 2003, global GDP growth averaged nearly 6 percent at an annualized rate, the highest since late 1999. While this was in part due to one-off factors—notably a surge in consumption in the United States due to the short-term impact of tax cuts and mortgage refinancing, and the rebound from the slowdown related to Severe Acute Respiratory Syndrome (SARS) in Asia—recent data suggest that global GDP growth has remained solid in early 2004.

While a recovery now appears under way in all regions, its pace and nature vary significantly. To date, the upturn is most rapid in emerging Asia, particularly China, and the United States; it is least well-established in the euro area, where consumption remains weak and some key forward-looking indicators have fallen back or moved sideways in recent months. Differences in the strength of domestic demand, with respect to both consumption and investment, are particularly noticeable. Among the industrial countries, domestic demand is generally strongest in those countries with the largest current account deficits, so that the recovery is tending to exacerbate underlying imbalances (Figure 1.3). And while domestic demand growth has picked up substantially in emerging Asia, the regional current account surplus remains very large, with exports supported by the rebound in the information technology (IT) sector as well as depreciating exchange rates.

Exchange market developments have been dominated by a further decline in the U.S. dollar, driven primarily by concerns over the sustainability of the U.S. current account

**Figure 1.1. Global Indicators[1]**
*(Annual percent change unless otherwise noted)*

With the recovery increasingly established, global growth is expected to rise above trend in 2004, while inflation remains subdued.




[1]Shaded areas indicate IMF staff projections. Aggregates are computed on the basis of purchasing-power-parity weights unless otherwise noted.
[2]Average growth rates for individual countries, aggregated using purchasing-power-parity weights; the aggregates shift over time in favor of faster growing countries, giving the line an upward trend.
[3]GDP-weighted average of the 10-year (or nearest maturity) government bond yields less inflation rates for the United States, Japan, Germany, France, Italy, the United Kingdom, and Canada. Excluding Italy prior to 1972.
[4]Simple average of spot prices of U.K. Brent, Dubai, and West Texas Intermediate crude oil.

deficit.[1] Notwithstanding some rebound since late February, the U.S. dollar has depreciated by 3¼ percent in trade-weighted terms since the Group of Seven (G-7) statement on exchange rate issues of September 19, 2003—a cumulative decline of 16½ percent from its peak in February 2002. To date, the adjustment has been relatively orderly, with little sign of stress in other financial markets, and volatility in currency markets is close to historical norms. However, the distribution of corresponding appreciations across countries and regions has remained uneven, focused primarily on the euro and a number of other industrial country currencies (Figure 1.4), including, increasingly, the yen—the latter despite substantial official intervention. Emerging market currencies, while generally appreciating somewhat against the U.S. dollar, have depreciated in trade-weighted terms. In Asia, this has been accompanied by substantial intervention and a further buildup in official reserves.

Elsewhere in financial markets, the broad-based rally has continued, with some consolidation since February, particularly following the terrorist attacks in Madrid and with rising geopolitical uncertainties elsewhere. Since the last *World Economic Outlook*, equity prices have risen strongly in both mature and emerging markets; bond spreads have dropped further, particularly for high-yield corporates and emerging markets; and financing flows to emerging markets have rebounded, with net private inflows rising to $140 billion in 2003 (Figures 1.5 and 1.6; Table 1.2). This generalized shift toward riskier assets was partly due to actual (and perceived) improvements in fundamentals—notably, the strengthening recovery, rising corporate profitability, and improving credit quality in both corporate and emerging markets—but clearly also reflected more temporary factors, notably easy monetary conditions and abundant liquidity. Given concerns that markets were becoming

[1]See the IMF's April 2004 *Global Financial Stability Report* for a detailed discussion of financial market developments and issues.

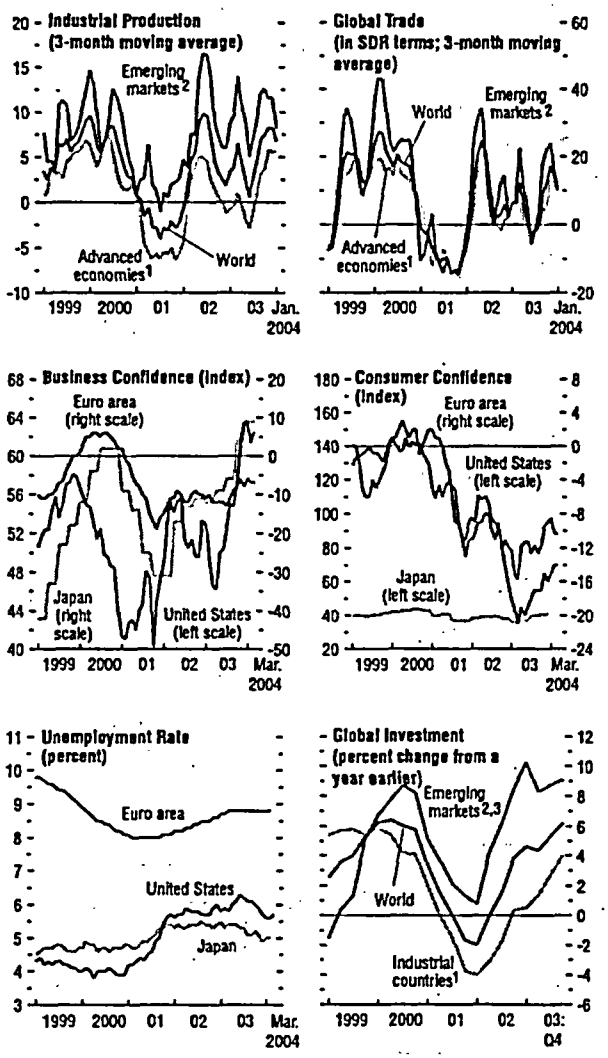
**Table 1.1. Overview of the *World Economic Outlook* Projections**
*(Annual percent change unless otherwise noted)*

| | 2002 | 2003 | Current Projections 2004 | Current Projections 2005 | Difference from September 2003 Projections[1] 2003 | Difference from September 2003 Projections[1] 2004 |
|---|---|---|---|---|---|---|
| **World output** | **3.0** | **3.9** | **4.6** | **4.4** | **0.6** | **0.6** |
| Advanced economies | 1.7 | 2.1 | 3.5 | 3.1 | 0.3 | 0.6 |
| United States | 2.2 | 3.1 | 4.8 | 3.9 | 0.5 | 0.7 |
| Euro area | 0.9 | 0.4 | 1.7 | 2.3 | — | −0.1 |
| Germany | 0.2 | −0.1 | 1.6 | 1.9 | −0.1 | — |
| France | 1.2 | 0.2 | 1.8 | 2.4 | −0.3 | −0.2 |
| Italy | 0.4 | 0.3 | 1.2 | 2.0 | −0.1 | −0.4 |
| Spain | 2.0 | 2.4 | 2.8 | 3.3 | 0.2 | — |
| Japan | −0.3 | 2.7 | 3.4 | 1.9 | 0.7 | 1.9 |
| United Kingdom | 1.7 | 2.3 | 3.5 | 2.5 | 0.7 | 1.0 |
| Canada | 3.3 | 1.7 | 2.8 | 3.1 | −0.2 | −0.4 |
| Other advanced economies | 2.8 | 1.9 | 3.2 | 3.5 | 0.2 | 0.3 |
| Newly industrialized Asian economies | 5.1 | 3.0 | 5.3 | 5.0 | 0.7 | 1.1 |
| Other emerging market and developing countries | 4.6 | 6.1 | 6.0 | 5.9 | 1.0 | 0.6 |
| Africa | 3.5 | 4.1 | 4.2 | 5.4 | 0.4 | −0.4 |
| Sub-Sahara | 3.5 | 3.5 | 4.2 | 5.7 | 0.4 | −0.6 |
| Central and eastern Europe | 4.4 | 4.5 | 4.5 | 4.4 | 0.6 | 0.1 |
| Commonwealth of Independent States | 5.1 | 7.6 | 6.0 | 5.2 | 1.7 | 0.9 |
| Russia | 4.7 | 7.3 | 6.0 | 5.3 | 1.4 | 1.0 |
| Excluding Russia | 6.2 | 8.1 | 5.9 | 5.0 | 2.5 | 0.7 |
| Developing Asia | 6.4 | 7.8 | 7.4 | 7.0 | 1.4 | 0.9 |
| China | 8.0 | 9.1 | 8.5 | 8.0 | 1.6 | 1.0 |
| India | 4.7 | 7.4 | 6.8 | 6.0 | 1.8 | 0.9 |
| ASEAN-4[2] | 4.3 | 5.0 | 5.4 | 5.4 | 0.9 | 1.0 |
| Middle East | 4.2 | 5.4 | 4.1 | 5.0 | 0.5 | −0.2 |
| Western Hemisphere | −0.1 | 1.7 | 3.9 | 3.7 | 0.1 | 0.4 |
| Brazil | 1.9 | −0.2 | 3.5 | 3.5 | −1.7 | 0.5 |
| Mexico | 0.7 | 1.3 | 3.3 | 3.3 | −0.1 | −0.2 |
| *Memorandum* | | | | | | |
| World growth based on market exchange rates | 1.8 | 2.7 | 3.8 | 3.5 | 0.5 | 0.6 |
| **World trade volume (goods and services)** | **3.1** | **4.5** | **6.8** | **6.6** | **1.6** | **1.3** |
| Imports | | | | | | |
| Advanced economies | 2.3 | 3.5 | 5.7 | 5.4 | 0.6 | 1.0 |
| Other emerging market and developing countries | 6.2 | 8.9 | 10.2 | 9.4 | 3.5 | 2.3 |
| Exports | | | | | | |
| Advanced economies | 1.9 | 2.7 | 6.3 | 6.1 | 1.1 | 1.2 |
| Other emerging market and developing countries | 6.5 | 8.7 | 8.1 | 8.7 | 4.1 | 1.4 |
| **Commodity prices (U.S. dollars)** | | | | | | |
| Oil[3] | 2.5 | 15.8 | 3.8 | −10.0 | 1.6 | 14.4 |
| Nonfuel (average based on world commodity export weights) | 0.5 | 7.1 | 7.6 | −0.8 | 2.0 | 5.2 |
| **Consumer prices** | | | | | | |
| Advanced economies | 1.5 | 1.8 | 1.7 | 1.7 | — | 0.4 |
| Other emerging market and developing countries | 6.0 | 6.1 | 5.7 | 5.0 | −0.1 | 0.5 |
| **Six-month London interbank offered rate (LIBOR, percent)** | | | | | | |
| On U.S. dollar deposits | 1.9 | 1.2 | 1.3 | 3.5 | — | −0.7 |
| On euro deposits | 3.3 | 2.3 | 2.1 | 2.6 | 0.1 | −0.3 |
| On Japanese yen deposits | 0.1 | 0.1 | 0.1 | 0.4 | — | −0.1 |

Note: Real effective exchange rates are assumed to remain constant at the levels prevailing during February 13–March 12, 2004.
[1]Using updated purchasing-power-parity (PPP) weights, summarized in the Statistical Appendix, Table A.
[2]Includes Indonesia, Malaysia, the Philippines, and Thailand.
[3]Simple average of spot prices of U.K. Brent, Dubai, and West Texas Intermediate crude oil. The average price of oil in U.S. dollars a barrel was $28.89 in 2003; the assumed price is $30.00 in 2004, and $27.00 in 2005.

**Figure 1.2. Current and Forward-Looking Indicators**
*(Percent change from previous quarter at annual rate unless otherwise noted)*

Industrial production and trade growth rebounded in the second half of 2003, accompanied by improvements in forward-looking indicators, particularly business confidence.




Sources: Business confidence for the United States, the Institute for Supply Management; for the euro area, the European Commission; and for Japan, Bank of Japan. Consumer confidence for the United States, the Conference Board; for the euro area, the European Commission; and for Japan, Cabinet Office (Economic Planning Agency). All others, Haver Analytics.

[1] Australia, Canada, Denmark, euro area, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States.

[2] Argentina, Brazil, Bulgaria, Chile, China, Colombia, Czech Republic, Estonia, Hong Kong SAR, Hungary, India, Indonesia, Israel, Korea, Latvia, Lithuania, Malaysia, Mexico, Pakistan, Peru, the Philippines, Poland, Romania, Russia, Singapore, Slovak Republic, Slovenia, South Africa, Taiwan Province of China, Thailand, Turkey, Ukraine, and Venezuela.

[3] Data for China, India, Pakistan, and Russia are interpolated.

richly valued, the recent consolidation is a welcome development, especially since it is being accompanied by signs of greater investor discrimination. Notwithstanding the deterioration in fiscal positions, long-run interest rates remain unusually low by historical standards, apparently partly reflecting expectations that monetary policy will remain accommodative for a significant period, but also due to cyclical factors (including the rebound in U.S. corporate profitability, which has so far allowed the pickup in investment to be financed without substantial recourse to borrowing).

The increasingly rapid global recovery, combined with currency developments, has also fed through to commodity prices (see Appendix 1.1). Oil prices have climbed markedly, with spot prices rising from $26½ a barrel in September 2003 to $34 a barrel in mid-April 2004. A significant portion of this increase appears to reflect the depreciation of the U.S. dollar (with a correspondingly limited impact on global growth). The remainder is due to higher-than-expected demand, particularly in the United States and China; relatively low inventories; earlier delays in restoring Iraq's oil production; OPEC announcements of prospective production cuts; and sizable speculative activity. Since late March, price swings have been especially pronounced; as of April 13, futures markets suggest that oil prices will average about $32½ a barrel for 2004 as a whole, about 8 percent higher than assumed in the macroeconomic projections. Consequently, potential for considerable volatility remains, with much depending on the outlook for demand, geopolitical developments, the inventories situation, and the extent and pace at which speculative positions are unwound. Nonfuel commodity prices have also rallied, increasing by about 10 percent in SDR terms since mid-2003, with metals (traditionally the most cyclical commodity) and food and agricultural raw materials experiencing the largest gains. While nonfuel prices are expected to stay firm, they remain moderate by historical standards (Figure 1.1) and their average pace of increase is likely to slow in 2004 as earlier agricultural supply shocks unwind and

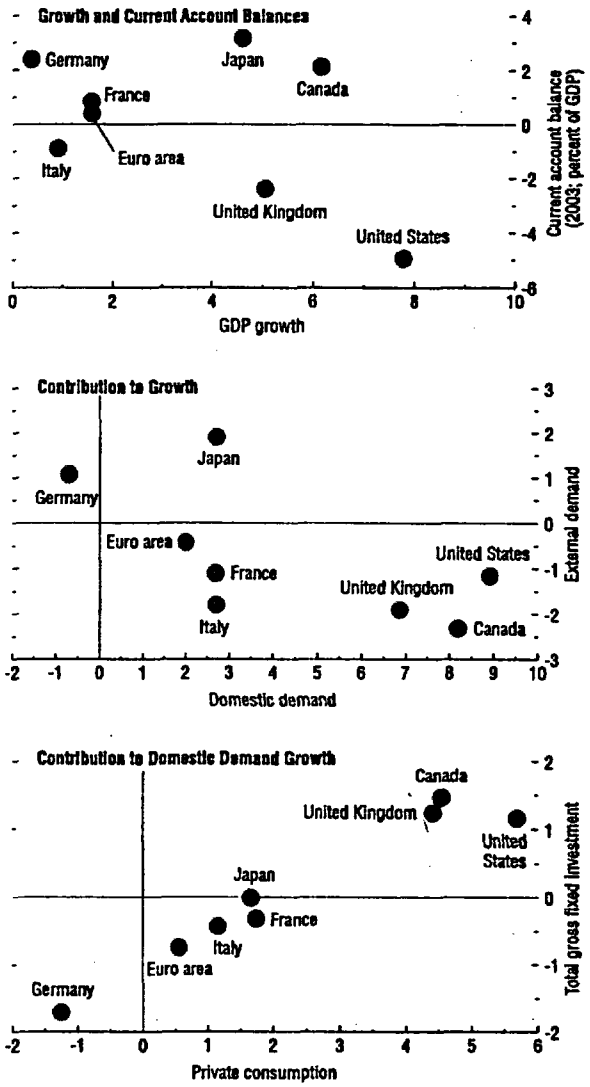
metals production responds to higher prices. Activity in the semiconductor market picked up strongly during 2003, and—despite some recent slackening—forward-looking indicators generally signal further strength ahead.

Inflation—with a very few exceptions—remains subdued (Table 1.3). Consumer price inflation in advanced countries averaged 1.8 percent in 2003, and—notwithstanding rising commodity prices—is projected to remain moderate in 2004, reflecting continued excess capacity, weak labor markets, and limited producer pricing power in the face of strong domestic and global competition. Inflation in other emerging market and developing countries is also now in (or very close to) the single digits in every major region. Even so, concerns about deflation have moderated, reflecting growing confidence that the recovery will be sustained, rising commodity prices, and commitments by several central banks to aggressively address deflationary pressures were they to arise. In emerging Asia, while inflation is still low, it is edging upward; and in China, concerns about falling prices have given way to worries about overheating and the risk of inflationary pressures.

With the global recovery proceeding more rapidly than anticipated at the time of the last *World Economic Outlook*, the IMF staff's baseline forecast has been revised upward markedly. Global growth in 2003 is now estimated at 3.9 percent, rising to 4.6 percent in 2004 (both 0.6 of a percentage point higher than expected last September) and slowing slightly to 4.4 percent in 2005. This is expected to be underpinned by continued policy stimulus already in the pipeline; the improving situation in the corporate sector, including a strong rebound in corporate profits, favorable financing conditions, and renewed strength in IT; wealth effects from the rise in equity markets over the past year; and a further pickup in inventories. The forecast assumes that monetary policy in the United States is tightened moderately with interest rates beginning to rise in the second half of 2004, that monetary policy in the euro area remains broadly unchanged this year, and

**Figure 1.3. G-7: The Differing Nature of the Recovery**
*(Percent change from 2001Q3 to 2003Q4)*

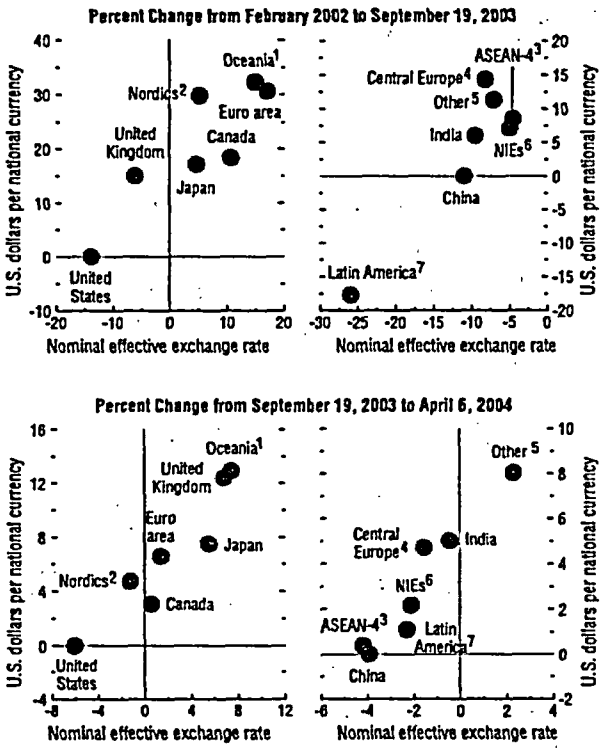
The strength and nature of the recovery has varied significantly across G-7 countries, with domestic demand—particularly consumption—being strongest in those countries with largest current account deficits.




Sources: Haver Analytics; and IMF staff calculations.

**Figure 1.4. Global Exchange Rate Developments**
*(Percent)*

Since the G-7 statement on exchange rate issues of September 19, 2003, the depreciation of the dollar has continued to be matched by appreciation of the euro, yen, and some other industrial country currencies; emerging market currencies have depreciated further in nominal effective terms.




Sources: Bloomberg Financial, LP; and IMF staff calculations.
[1]Australia and New Zealand.
[2]Denmark, Norway, and Sweden.
[3]Indonesia, Malaysia, the Philippines, and Thailand.
[4]Czech Republic, Hungary, and Poland.
[5]Russia, Turkey, and South Africa.
[6]Hong Kong SAR, Korea, Singapore, and Taiwan Province of China.
[7]Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

that quantitative easing in Japan continues. Fiscal policies vary widely; they are expected to be expansionary in the United States and Italy, and neutral or mildly contractionary elsewhere (Figure 1.7; Table 1.4; Box A1 in the Statistical Appendix). As usual, the *World Economic Outlook* projections are based on the assumption that real effective exchange rates remain unchanged over the forecast period.

The projected pace and nature of the recovery in individual countries and regions vary considerably, reflecting differing degrees of policy stimulus; exchange rate developments; progress in corporate restructuring; openness, and therefore ability to benefit from rising global trade, especially in IT; and region-specific developments (Figure 1.8):

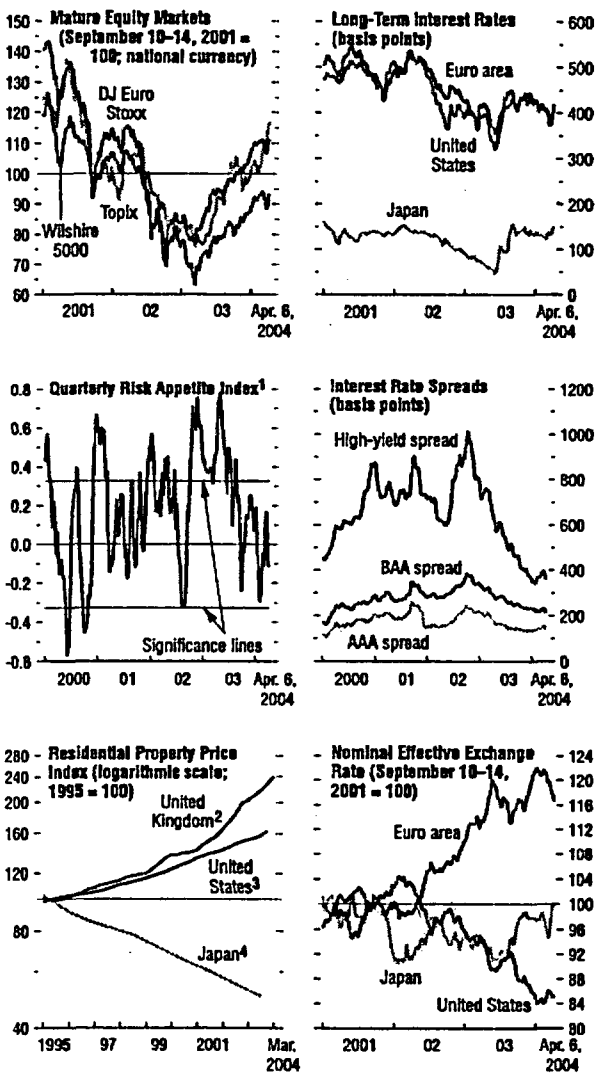
- In *industrial countries*, the recovery is again projected to be strongest in the United States, with GDP growth rebounding to 4.6 percent in 2004, accompanied by continued strong productivity growth. With the impact of past fiscal and monetary stimulus waning during 2004, much will depend on continued solid investment growth and a sustained pickup in employment (of which there are only tentative signs as yet). In the euro area, the recovery remains subdued; while there are signs of a pickup in fixed investment, household consumption remains weak. Solid household balance sheets and equity market gains are expected to support a gradual strengthening in domestic demand but, with relatively less policy stimulus in the pipeline and corporate restructuring apparently having some way to go, downside risks remain and much continues to depend on external demand, the traditional driver of European recoveries. In Japan, GDP growth has continued to exceed expectations, with strong external demand—notably from China—accompanied by rising investment and latterly a pickup in consumption. Looking forward, GDP growth is projected at 3.4 percent in 2004, the highest since 1996, moderating thereafter, with deflation and corporate and banking system weaknesses remaining concerns. In both Europe

and Japan, a further sharp currency appreciation would be a key short-term risk.

- *Emerging market and developing countries* have also seen a rebound in activity, with GDP growth projections for 2004 marked up—to varying extents—in most major regions. The growth momentum has been particularly strong in *emerging Asia*, where GDP growth is projected to remain at 7.2 percent in 2004, the highest level since before the 1997/98 crisis, underpinned by accommodative macroeconomic policies, competitive exchange rates, and the recovery in the IT sector. Buoyant growth in China, underpinned by rapid increases in investment and exports, has provided important support to activity in countries within and outside the region; GDP growth in India has also exceeded expectations, aided by favorable rainfall and low domestic interest rates. With trade expanding rapidly, GDP growth and current account surpluses in Asia could both be higher than projected. In *Latin America*, while GDP growth—notably in Brazil—remained weak in 2003, the recovery is expected to consolidate in 2004, underpinned by strengthening domestic demand, higher commodity prices, and the global recovery. With many countries in the region facing substantial external financing requirements over the medium term, a reversal of the currently benign external financing conditions—for example, owing to higher interest rates in industrial countries—remains an important risk. In the *Middle East*, growth is expected to fall back from the relatively high levels of 2003, mainly owing to slower growth in oil production, but to remain robust; while oil prices are presently favorable, the medium-term outlook remains a key risk, especially given difficult fiscal situations in a number of countries. GDP growth in the *Commonwealth of Independent States* has also exceeded expectations, underpinned by robust upturns in Russia and Ukraine, including—encouragingly—some pickup in nonenergy sector investment. In *central and eastern Europe*, a more moderate upturn is pro-

## Figure 1.5. Developments in Mature Financial Markets

The rebound in mature financial markets has continued, accompanied by a further decline in credit spreads. Long-run interest rates have stabilized, and remain relatively low by historical standards.




Sources: Bloomberg Financial Markets, LP; State Street Bank; HBOS Plc.; Office of Federal Housing Enterprise Oversight; Japan Real Estate Institute; and IMF staff calculations.

[1] IMF/State Street risk appetite indicators.

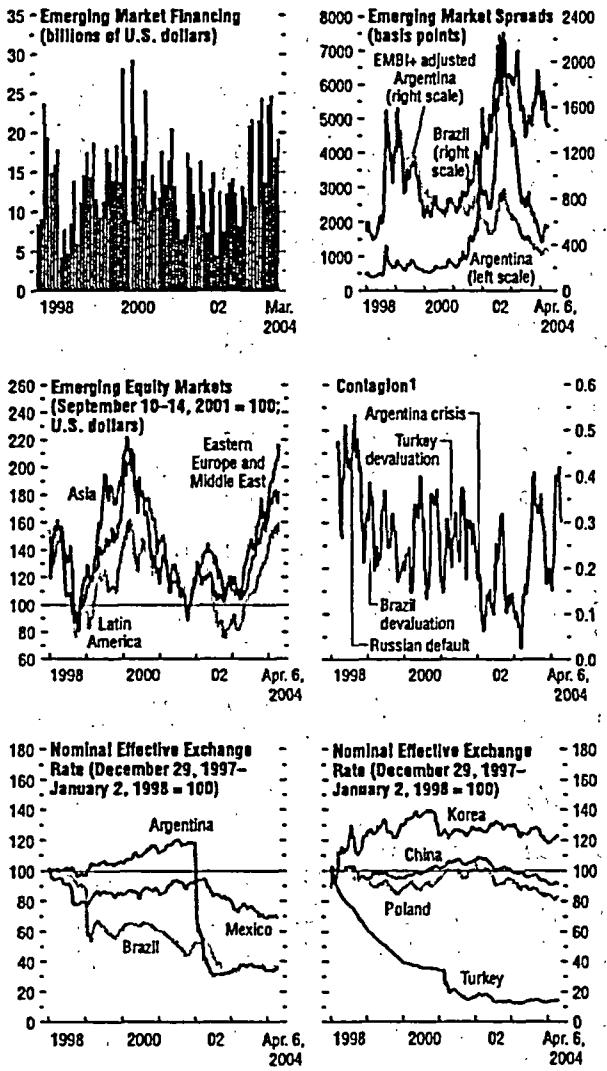
[2] Halifax housing index as measured by the value of all houses.

[3] House price index as measured by the value of single-family homes in the United States as a whole, in various regions of the country, and in the individual states and the District of Columbia.

[4] Urban land price index: average of all categories in six large city areas.

## Figure 1.6. Emerging Market Financial Conditions

Gross inflows to emerging markets have picked up sharply, while spreads remain very low by historical standards.




Sources: Bloomberg Financial Markets, LP; Capital Data; and IMF staff calculations.
[1]Average of 30-day rolling cross-correlation of emerging debt market spreads.

jected, constrained by the relatively weak performance of the euro area and the need for fiscal consolidation in many countries.

- Among the *poorest countries*, GDP growth in sub-Saharan Africa (excluding South Africa) jumped to 4.4 percent in 2003, aided by surging oil production in Nigeria. GDP growth in the region is expected to strengthen further in 2004, reflecting a combination of improving macroeconomic fundamentals; higher commodity prices; better weather conditions (Ethiopia); and—last but not least—rising oil and gas production in several countries. While the projected increase in GDP growth is encouraging, *World Economic Outlook* projections of growth in Africa have consistently been overoptimistic in the past, in part reflecting unanticipated political instability—in this context, the recent deterioration in Côte d'Ivoire is cause for concern—or natural disasters.[2]

With the global recovery becoming increasingly well established, the balance of risks has significantly improved. Indeed, notwithstanding higher oil prices, a number of factors could generate a more robust short-term upturn in some regions, including the strong rebound in world trade; the generalized rebound in financial markets; and the continued strength of the U.S. economy, which is often a leading indicator of developments elsewhere. It is also relevant to note that, just as forecasters tend to be overoptimistic during downturns, they tend to be overly pessimistic during recoveries. That said, there are two important caveats. First, as recent events in Madrid and elsewhere underscore, geopolitical uncertainties remain an important—if difficult to quantify—risk; and further oil price volatility remains a concern. Second, looking forward, the global economy continues to face significant risks, some of which have been exac-

[2]In spring *World Economic Outlooks* since 1990, sub-Saharan African GDP growth for the current year has been overestimated on average by 1 percentage point, and GDP growth in the succeeding year, by 1.7 percentage points.

## Table 1.2. Emerging Market and Developing Countries: Net Capital Flows[1]

*(Billions of U.S. dollars)*

| | 1996 | 1997 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Total[2]** | | | | | | | | | | |
| Private capital flows, net[3] | 217.8 | 177.6 | 77.4 | 86.6 | 42.2 | 20.6 | 47.0 | 131.2 | 162.9 | 100.9 |
| Private direct investment, net | 116.0 | 144.0 | 153.0 | 171.2 | 175.0 | 189.1 | 139.3 | 119.3 | 135.5 | 143.3 |
| Private portfolio investment, net | 85.0 | 62.8 | 38.4 | 66.0 | 6.1 | −95.7 | −98.6 | −87.5 | −43.9 | −36.9 |
| Other private capital flows, net | 16.8 | −29.2 | −114.0 | −150.6 | −139.0 | −72.8 | 6.3 | 99.3 | 71.2 | −5.5 |
| Official flows, net | −5.1 | 48.3 | 47.3 | 6.4 | −14.5 | 25.8 | 3.3 | −7.2 | −20.0 | −18.0 |
| Change in reserves[4] | −91.2 | −104.1 | −34.6 | −92.7 | −116.9 | −113.5 | −196.0 | −363.9 | −303.8 | −175.7 |
| *Memorandum* | | | | | | | | | | |
| Current account[5] | −95.4 | −80.8 | −51.4 | 38.8 | 128.9 | 88.1 | 145.8 | 207.3 | 162.5 | 111.0 |
| **Africa** | | | | | | | | | | |
| Private capital flows, net[3] | 9.1 | 4.0 | 9.1 | 11.8 | 1.1 | 6.5 | 7.2 | 9.5 | 13.2 | 16.8 |
| Private direct investment, net | 3.6 | 7.9 | 6.9 | 9.8 | 8.2 | 23.9 | 12.3 | 14.3 | 13.7 | 15.6 |
| Private portfolio investment, net | 2.8 | 7.0 | 3.7 | 8.3 | −2.2 | −8.8 | −0.7 | 1.8 | 2.5 | 3.4 |
| Other private capital flows, net | 2.7 | −10.9 | −1.6 | −6.3 | −4.9 | −8.5 | −4.4 | −6.6 | −3.0 | −2.4 |
| Official flows, net | −3.0 | 3.3 | 4.7 | 3.5 | 3.1 | 1.9 | 4.2 | 4.1 | 4.2 | 2.7 |
| Change in reserves[4] | −6.7 | −11.2 | 2.7 | −3.4 | −13.2 | −12.5 | −7.6 | −14.4 | −13.5 | −11.4 |
| **Central and eastern Europe** | | | | | | | | | | |
| Private capital flows, net[3] | 25.6 | 21.8 | 27.3 | 34.5 | 33.4 | −1.1 | 43.8 | 43.5 | 45.7 | 48.1 |
| Private direct investment, net | 10.4 | 11.6 | 18.0 | 21.3 | 22.9 | 22.7 | 23.1 | 13.2 | 18.2 | 20.9 |
| Private portfolio investment, net | 1.3 | 5.4 | −2.4 | 4.3 | 3.6 | −0.2 | 0.7 | 3.9 | 5.7 | 8.7 |
| Other private capital flows, net | 13.9 | 4.8 | 11.8 | 8.8 | 6.9 | −23.6 | 20.0 | 26.4 | 21.7 | 20.5 |
| Official flows, net | — | −2.8 | 1.1 | −2.0 | 2.7 | 6.5 | −7.2 | −5.7 | −6.1 | −6.5 |
| Change in reserves[4] | −7.3 | −10.1 | −9.6 | −11.0 | −3.1 | 6.1 | −13.6 | −11.1 | −5.5 | −7.8 |
| **Commonwealth of Independent States[6]** | | | | | | | | | | |
| Private capital flows, net[3] | −7.9 | 16.3 | 4.5 | −7.6 | −15.1 | −5.6 | −9.7 | 4.8 | −0.5 | 4.4 |
| Private direct investment, net | 4.9 | 5.9 | 5.3 | 4.3 | 2.4 | 5.0 | 4.2 | 3.6 | 4.3 | 4.0 |
| Private portfolio investment, net | −0.1 | 17.6 | 7.7 | −3.0 | −6.0 | −9.2 | −8.2 | −13.3 | −8.5 | −8.8 |
| Other private capital flows, net | −12.7 | −7.2 | −8.5 | −8.9 | −11.5 | −1.3 | −5.7 | 14.6 | 3.7 | 9.3 |
| Official flows, net | 10.9 | 8.5 | 9.4 | 0.1 | −3.4 | −3.7 | −1.1 | −4.2 | −1.7 | −1.3 |
| Change in reserves[4] | 2.1 | −3.8 | 7.5 | −2.0 | −17.2 | −11.3 | −11.8 | −31.9 | −32.4 | −25.7 |
| **Emerging Asia[7]** | | | | | | | | | | |
| Private capital flows, net[3] | 118.6 | 34.0 | −50.6 | 2.7 | −4.2 | 10.1 | 24.8 | 84.3 | 116.8 | 19.5 |
| Private direct investment, net | 53.4 | 56.5 | 56.1 | 66.4 | 67.4 | 60.5 | 53.1 | 49.3 | 56.0 | 54.9 |
| Private portfolio investment, net | 32.0 | 6.3 | 8.4 | 56.6 | 20.1 | −54.4 | −57.6 | −58.4 | −18.1 | −19.7 |
| Other private capital flows, net | 33.1 | −28.8 | −115.0 | −120.2 | −91.7 | 4.0 | 29.3 | 93.4 | 78.9 | −15.7 |
| Official flows, net | −13.2 | 25.2 | 17.5 | 1.8 | 4.0 | −2.0 | −1.9 | −8.6 | −3.5 | −6.7 |
| Change in reserves[4] | −46.1 | −35.9 | −52.6 | −87.1 | −60.8 | −90.7 | −157.8 | −245.3 | −234.8 | −118.0 |
| **Middle East[8]** | | | | | | | | | | |
| Private capital flows, net[3] | 2.0 | 9.6 | 8.4 | −7.9 | −24.9 | −16.3 | −27.6 | −22.9 | −30.1 | −16.3 |
| Private direct investment, net | 4.1 | 5.2 | 5.1 | 3.9 | 7.7 | 8.1 | 6.9 | 8.9 | 8.9 | 11.8 |
| Private portfolio investment, net | 1.0 | −2.7 | −6.2 | −4.5 | −12.3 | −15.8 | −19.0 | −24.3 | −27.5 | −23.2 |
| Other private capital flows, net | −3.1 | 7.2 | 9.5 | −7.3 | −20.4 | −8.6 | −15.4 | −7.4 | −11.4 | −4.9 |
| Official flows, net | 7.4 | 6.7 | 5.2 | 6.6 | −11.0 | −3.2 | −5.4 | −11.0 | −7.3 | −2.8 |
| Change in reserves[4] | −18.0 | −16.6 | 10.3 | −0.2 | −27.4 | −10.6 | −3.1 | −25.6 | −11.5 | −6.7 |
| **Western Hemisphere** | | | | | | | | | | |
| Private capital flows, net[3] | 70.4 | 91.9 | 78.6 | 53.2 | 51.9 | 26.9 | 8.5 | 11.8 | 17.9 | 28.4 |
| Private direct investment, net | 39.6 | 56.9 | 61.5 | 65.5 | 66.4 | 68.9 | 39.6 | 30.0 | 34.6 | 36.0 |
| Private portfolio investment, net | 47.9 | 29.2 | 27.2 | 4.4 | 2.9 | −7.2 | −13.7 | 2.9 | 2.1 | 4.8 |
| Other private capital flows, net | −17.1 | 5.8 | −10.1 | −16.6 | −17.4 | −34.7 | −17.4 | −21.1 | −18.8 | −12.4 |
| Official flows, net | −7.2 | 7.3 | 9.5 | −3.4 | −9.9 | 26.3 | 14.6 | 18.2 | −5.6 | −3.4 |
| Change in reserves[4] | −15.2 | −26.5 | 7.2 | 11.1 | 4.8 | 5.4 | −2.0 | −35.5 | −6.1 | −6.2 |
| ***Memorandum*** | | | | | | | | | | |
| **Fuel exporters** | | | | | | | | | | |
| Private capital flows, net[3] | −21.9 | 28.0 | 5.1 | −25.7 | −54.8 | −32.4 | −50.9 | −21.7 | −35.0 | −12.8 |
| **Nonfuel exporters** | | | | | | | | | | |
| Private capital flows, net[3] | 239.8 | 149.6 | 72.3 | 112.3 | 96.9 | 52.9 | 97.9 | 152.9 | 197.9 | 113.7 |

[1]Net capital flows comprise net direct investment, net portfolio investment, and other long- and short-term net investment flows, including official and private borrowing. In this table, Hong Kong SAR, Israel, Korea, Singapore, and Taiwan Province of China are included.
[2]Beginning with this issue, Hong Kong SAR is included in these totals and in the emerging Asia group.
[3]Because of data limitations, "other private capital flows, net" may include some official flows.
[4]A minus sign indicates an increase.
[5]The sum of the current account balance, net private capital flows, net official flows, and the change in reserves equals, with the opposite sign, the sum of the capital and financial account and errors and omissions. For regional current account balances, see Table 25 of the Statistical Appendix.
[6]Historical data have been revised, reflecting cumulative data revisions for Russia and the resolution of a number of data interpretation issues.
[7]Consists of developing Asia and the newly industrialized Asian economies.
[8]Includes Israel.

**Table 1.3. Advanced Economies: Real GDP, Consumer Prices, and Unemployment**
*(Annual percent change and percent of labor force)*

| | Real GDP | | | | Consumer Prices | | | | Unemployment | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 2002 | 2003 | 2004 | 2005 | 2002 | 2003 | 2004 | 2005 | 2002 | 2003 | 2004 | 2005 |
| **Advanced economies** | 1.7 | 2.1 | 3.5 | 3.1 | 1.5 | 1.8 | 1.7 | 1.7 | 6.4 | 6.6 | 6.4 | 6.3 |
| United States | 2.2 | 3.1 | 4.6 | 3.9 | 1.6 | 2.3 | 2.3 | 2.2 | 5.8 | 6.0 | 5.5 | 5.4 |
| Euro area[1] | 0.9 | 0.4 | 1.7 | 2.3 | 2.3 | 2.1 | 1.7 | 1.6 | 8.4 | 8.8 | 9.1 | 8.9 |
| Germany | 0.2 | −0.1 | 1.6 | 1.9 | 1.3 | 1.1 | 1.0 | 0.9 | 8.6 | 9.9 | 10.2 | 10.0 |
| France | 1.2 | 0.2 | 1.8 | 2.4 | 1.9 | 2.2 | 1.8 | 1.6 | 8.8 | 9.3 | 9.4 | 9.1 |
| Italy | 0.4 | 0.3 | 1.2 | 2.0 | 2.6 | 2.8 | 2.1 | 2.0 | 9.0 | 8.7 | 8.4 | 8.2 |
| Spain | 2.0 | 2.4 | 2.8 | 3.3 | 3.9 | 3.0 | 2.7 | 2.7 | 11.4 | 11.3 | 10.8 | 10.1 |
| Netherlands | 0.2 | −0.8 | 1.0 | 2.0 | 3.9 | 2.2 | 1.3 | 1.0 | 2.5 | 4.2 | 5.3 | 5.6 |
| Belgium | 0.7 | 1.1 | 1.8 | 2.4 | 1.6 | 1.5 | 1.4 | 1.4 | 7.3 | 8.1 | 8.3 | 8.2 |
| Austria | 1.4 | 0.7 | 1.4 | 2.4 | 1.7 | 1.3 | 1.3 | 1.3 | 4.3 | 4.4 | 4.4 | 4.1 |
| Finland | 2.3 | 1.9 | 2.9 | 2.5 | 2.0 | 1.3 | 0.7 | 1.0 | 9.1 | 9.0 | 8.8 | 8.5 |
| Greece | 3.8 | 4.2 | 4.0 | 3.0 | 3.9 | 3.6 | 3.3 | 3.1 | 9.9 | 9.8 | 9.7 | 9.8 |
| Portugal | 0.5 | −1.3 | 0.8 | 2.7 | 3.7 | 3.3 | 2.1 | 1.9 | 5.1 | 6.4 | 7.1 | 6.8 |
| Ireland | 6.9 | 1.4 | 3.6 | 4.7 | 4.7 | 4.0 | 2.6 | 2.4 | 4.2 | 4.9 | 5.0 | 4.9 |
| Luxembourg | 1.3 | 1.2 | 2.3 | 3.3 | 2.1 | 2.6 | 2.1 | 1.7 | 3.0 | 4.1 | 4.9 | 5.5 |
| Japan | −0.3 | 2.7 | 3.4 | 1.9 | −0.9 | −0.2 | −0.4 | −0.1 | 5.4 | 5.3 | 4.9 | 4.9 |
| United Kingdom[1] | 1.7 | 2.3 | 3.5 | 2.5 | 1.3 | 1.4 | 1.6 | 1.8 | 5.2 | 5.0 | 4.9 | 4.9 |
| Canada | 3.3 | 1.7 | 2.6 | 3.1 | 2.3 | 2.7 | 1.4 | 1.9 | 7.7 | 7.6 | 7.4 | 7.1 |
| Korea | 7.0 | 3.1 | 5.5 | 5.3 | 2.8 | 3.5 | 3.7 | 3.4 | 3.1 | 3.4 | 3.3 | 3.2 |
| Australia | 3.8 | 3.0 | 3.5 | 3.6 | 3.0 | 2.8 | 2.6 | 2.5 | 6.3 | 5.9 | 6.0 | 5.9 |
| Taiwan Province of China | 3.6 | 3.2 | 4.9 | 4.9 | −0.2 | −0.3 | 0.7 | 1.5 | 5.2 | 5.0 | 5.0 | 4.7 |
| Sweden | 2.1 | 1.6 | 2.5 | 2.7 | 2.0 | 2.3 | 1.2 | 2.1 | 4.0 | 4.9 | 4.8 | 4.5 |
| Switzerland | 0.2 | −0.5 | 1.7 | 2.2 | 0.6 | 0.6 | 0.3 | 0.4 | 2.5 | 3.5 | 3.2 | 2.9 |
| Hong Kong SAR | 2.3 | 3.3 | 5.5 | 4.5 | −3.0 | −2.6 | −0.5 | 0.8 | 7.3 | 7.9 | 6.4 | 5.3 |
| Denmark | 1.0 | 0.2 | 1.8 | 2.6 | 2.3 | 2.1 | 1.7 | 1.8 | 4.9 | 6.0 | 6.0 | 5.6 |
| Norway | 1.0 | 0.2 | 2.5 | 2.0 | 1.3 | 2.5 | 1.2 | 1.9 | 3.9 | 4.6 | 4.6 | 4.5 |
| Israel | −0.8 | 1.3 | 2.4 | 3.4 | 5.7 | 0.7 | −0.3 | 1.6 | 10.3 | 10.7 | 10.7 | 10.1 |
| Singapore | 2.2 | 1.1 | 5.0 | 4.0 | −0.4 | 0.5 | 1.2 | 1.5 | 4.4 | 4.7 | 4.2 | 3.8 |
| New Zealand[2] | 4.3 | 3.5 | 3.0 | 2.5 | 2.7 | 1.8 | 2.3 | 2.4 | 5.2 | 4.7 | 4.9 | 5.2 |
| Cyprus | 2.0 | 2.0 | 3.0 | 3.5 | 2.8 | 4.1 | 1.2 | 3.7 | 3.5 | 3.5 | 3.4 | 3.2 |
| Iceland | −0.6 | 4.0 | 3.5 | 4.6 | 4.8 | 2.0 | 2.1 | 3.3 | 2.5 | 3.3 | 3.0 | 2.5 |
| *Memorandum* | | | | | | | | | | | | |
| Major advanced economies | 1.4 | 2.2 | 3.5 | 3.0 | 1.3 | 1.7 | 1.6 | 1.6 | 6.5 | 6.8 | 6.5 | 6.4 |
| European Union | 1.1 | 0.8 | 2.0 | 2.4 | 2.2 | 2.0 | 1.7 | 1.7 | 7.7 | 8.2 | 8.3 | 8.1 |
| Newly industrialized Asian economies | 5.1 | 3.0 | 5.3 | 5.0 | 0.9 | 1.4 | 2.1 | 2.4 | 4.1 | 4.3 | 4.1 | 3.8 |

[1]Based on Eurostat's harmonized index of consumer prices.
[2]Consumer prices excluding interest rate components.

erbated by the proactive policy stance required in the last few years. As discussed below, it is not impossible that a number of these risks could have near-term consequences, for both financial markets and the real economy more generally.

- *As stressed in many past issues of the* World Economic Outlook, *the continued large current account deficit in the United States—matched by a fiscal deficit of similar size—and surpluses elsewhere, notably in Asia, remain a serious concern (Table 1.5).* In this regard, the depreciation of the U.S. dollar since early 2002 has been helpful, although corresponding appreciations have so far been unduly concentrated on a number of industrial country currencies, many with weak cyclical positions. However, in part because domestic demand continues to increase more rapidly than in its major trading partners, the U.S. current account deficit is projected to fall only modestly to 4 percent by 2009, suggesting that further U.S. dollar depreciation over the medium term may well be needed. It is possible that this process could unfold benignly, especially if strong U.S. productivity growth is maintained. As Chairman Greenspan has noted, the relative flexi-

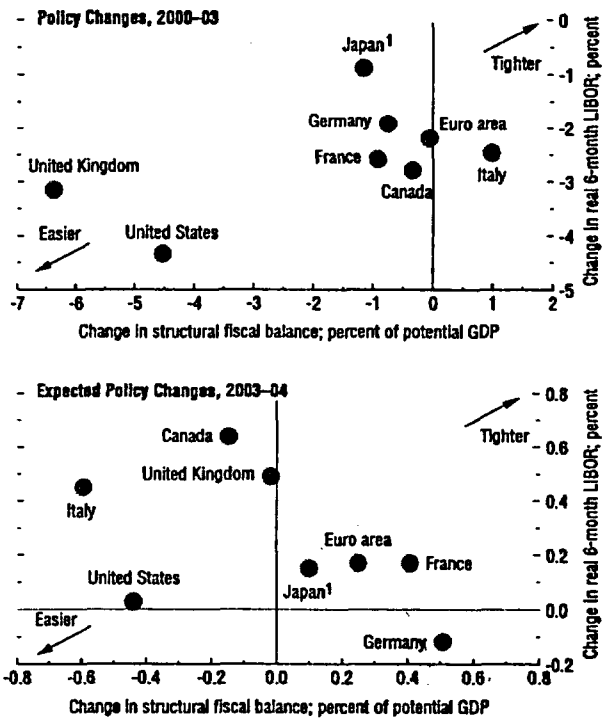
bility of the U.S. economy, and growing global financial integration, which should reduce the difficulties in financing deficits, are also positive factors. Even so, there are two clear concerns. First, as historical experience attests, even an orderly current account adjustment in the United States would likely be associated with a slowdown in GDP growth, as U.S. national saving rises and/or investment falls, especially if growth were not to pick up in the rest of the world.[3] Second, a more disorderly adjustment—including abrupt movements in exchange rates—cannot be ruled out. This would have significantly more serious consequences, with potential spillovers into other financial markets, including through higher U.S. interest rates (see Box 1.1). The growing importance of official purchases of U.S. assets by Asian central banks may reduce risks of disorderly adjustment in the short run, but if sustained they could raise these risks in the longer term, given the domestic and international difficulties associated with rapidly rising external reserves.

- *Global interest rates are very low, and will eventually have to rise substantially, but the timing and speed of future moves remain subject to considerable uncertainty.* As stressed in the IMF's *Global Financial Stability Report*, in a low-interest-rate environment there is a danger that asset prices, which have already rebounded substantially, could get ahead of fundamentals, and that future interest rate rises—especially if abrupt or unexpected—could lead to financial market volatility and possibly adversely affect the recovery. This is a particular concern in countries with buoyant property markets, including the United Kingdom, Australia, Ireland, and Spain, and to a lesser degree the United States and New Zealand (Box 1.2). In addition, while emerging market countries have taken advantage of benign financing conditions to improve the structure of their liabilities, the continued

[3]See "How Worrisome Are External Imbalances?" Chapter III, *World Economic Outlook*, September 2002, for a detailed discussion.

**Figure 1.7. Fiscal and Monetary Easing in the Major Advanced Countries**
*(Percent)*

Real interest rates are projected to rise in major advanced countries in 2004, accompanied by a shift toward fiscal consolidation (except in the United States).




Source: IMF staff estimates.
[1]For Japan, excludes bank support.

## Table 1.4. Major Advanced Economies: General Government Fiscal Balances and Debt[1]

*(Percent of GDP)*

| | 1988–97 | 1998 | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 | 2009 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Major advanced economies** | | | | | | | | | | |
| Actual balance | −3.6 | −1.3 | −1.0 | — | −1.5 | −3.7 | −4.7 | −4.5 | −3.6 | −2.8 |
| Output gap[2] | −0.2 | 0.1 | 0.5 | 1.3 | −0.5 | −1.7 | −2.1 | −1.2 | −0.8 | — |
| Structural balance | −3.4 | −1.4 | −1.3 | −1.0 | −1.5 | −3.0 | −3.7 | −3.8 | −3.2 | −2.8 |
| **United States** | | | | | | | | | | |
| Actual balance | −3.6 | 0.4 | 0.9 | 1.6 | −0.2 | −3.3 | −4.9 | −4.8 | −3.5 | −3.0 |
| Output gap[2] | −0.9 | 0.9 | 1.9 | 2.2 | −0.7 | −1.9 | −2.2 | −1.0 | −0.5 | — |
| Structural balance | −3.3 | — | — | 0.6 | — | −2.5 | −3.9 | −4.4 | −3.3 | −3.0 |
| Net debt | 61.5 | 57.6 | 53.8 | 48.9 | 47.1 | 48.2 | 49.7 | 50.5 | 51.6 | 54.5 |
| Gross debt | 67.2 | 66.1 | 62.2 | 57.7 | 55.8 | 56.8 | 58.5 | 59.6 | 61.3 | 64.0 |
| **Euro area** | | | | | | | | | | |
| Actual balance | ... | −2.3 | −1.3 | −0.9 | −1.7 | −2.3 | −2.8 | −2.8 | −2.4 | −0.9 |
| Output gap[2] | ... | −0.4 | 0.2 | 1.3 | 0.7 | −0.5 | −2.1 | −2.4 | −2.2 | −0.1 |
| Structural balance | ... | −1.9 | −1.3 | −1.6 | −2.1 | −2.1 | −1.6 | −1.4 | −1.2 | −0.8 |
| Net debt | ... | 61.8 | 61.6 | 59.1 | 58.8 | 58.7 | 60.0 | 60.2 | 60.1 | 55.2 |
| Gross debt | ... | 73.6 | 72.2 | 69.7 | 69.4 | 69.2 | 70.4 | 70.6 | 70.3 | 64.7 |
| **Germany[3]** | | | | | | | | | | |
| Actual balance | −2.4 | −2.2 | −1.5 | 1.3 | −2.8 | −3.5 | −4.0 | −3.5 | −3.1 | −1.8 |
| Output gap[2] | 0.6 | −0.4 | −0.1 | 0.9 | 0.3 | −0.9 | −2.5 | −2.5 | −2.2 | — |
| Structural balance[4] | −2.6 | −1.7 | −1.2 | −1.6 | −2.9 | −2.9 | −2.4 | −1.9 | −1.6 | −1.8 |
| Net debt | 35.3 | 53.3 | 54.9 | 52.8 | 53.5 | 55.4 | 58.7 | 60.0 | 61.2 | 60.7 |
| Gross debt | 48.4 | 60.9 | 61.2 | 60.2 | 59.5 | 60.8 | 64.1 | 65.4 | 66.6 | 66.1 |
| **France** | | | | | | | | | | |
| Actual balance | −3.7 | −2.7 | −1.8 | −1.4 | −1.4 | −3.2 | −4.1 | −3.9 | −3.2 | −0.5 |
| Output gap[2] | −0.9 | −1.5 | −0.6 | 1.2 | 1.0 | — | −1.8 | −2.3 | −2.1 | — |
| Structural balance[4] | −3.0 | −1.8 | −1.4 | −2.0 | −2.1 | −3.2 | −2.9 | −2.5 | −1.9 | −0.5 |
| Net debt | 35.2 | 49.8 | 48.8 | 47.5 | 48.2 | 49.1 | 53.5 | 55.3 | 55.9 | 51.4 |
| Gross debt | 44.2 | 59.5 | 58.5 | 57.1 | 56.8 | 58.7 | 63.2 | 64.9 | 65.6 | 61.0 |
| **Italy** | | | | | | | | | | |
| Actual balance | −9.2 | −2.8 | −1.7 | −0.6 | −2.6 | −2.3 | −2.4 | −2.9 | −2.8 | −1.5 |
| Output gap[2] | 0.1 | −0.1 | — | 1.0 | 0.6 | −1.0 | −2.5 | −3.0 | −2.8 | — |
| Structural balance[4] | −9.0 | −2.8 | −1.8 | −2.4 | −3.1 | −2.6 | −1.4 | −2.0 | −1.8 | −1.5 |
| Net debt | 104.4 | 110.1 | 108.4 | 104.5 | 103.9 | 101.4 | 99.8 | 98.8 | 97.6 | 90.1 |
| Gross debt | 110.3 | 116.4 | 114.6 | 111.2 | 110.6 | 108.0 | 106.2 | 105.2 | 103.9 | 95.9 |
| **Japan** | | | | | | | | | | |
| Actual balance | −1.2 | −5.5 | −7.2 | −7.5 | −6.1 | −7.9 | −8.2 | −7.1 | −6.6 | −6.0 |
| Excluding social security | −3.6 | −6.9 | −8.2 | −8.0 | −6.2 | −7.6 | −7.8 | −6.6 | −5.9 | −5.2 |
| Output gap[2] | 1.2 | −1.3 | −2.5 | −1.2 | −2.3 | −3.9 | −2.6 | −0.6 | — | 0.1 |
| Structural balance | −1.6 | −5.1 | −6.3 | −7.0 | −5.3 | −6.4 | −7.2 | −6.9 | −6.6 | −6.1 |
| Excluding social security | −3.8 | −6.6 | −7.7 | −7.7 | −5.7 | −6.7 | −7.2 | −6.5 | −5.9 | −5.2 |
| Net debt | 20.2 | 45.8 | 53.5 | 59.1 | 65.2 | 71.4 | 79.6 | 85.9 | 92.2 | 110.7 |
| Gross debt | 81.0 | 117.9 | 131.0 | 139.3 | 148.9 | 158.5 | 166.1 | 171.2 | 176.4 | 186.8 |
| **United Kingdom** | | | | | | | | | | |
| Actual balance | −3.7 | 0.1 | 1.1 | 3.9 | 0.8 | −1.5 | −3.0 | −3.0 | −3.0 | −2.7 |
| Output gap[2] | — | 0.7 | 0.1 | 1.1 | 0.8 | −0.4 | −0.8 | 0.3 | 0.3 | — |
| Structural balance[4] | −3.6 | −0.2 | 0.9 | 3.7 | 0.2 | −1.7 | −2.7 | −2.8 | −3.0 | −2.7 |
| Net debt | 31.3 | 42.4 | 40.2 | 34.4 | 33.0 | 33.0 | 33.5 | 34.5 | 35.8 | 39.7 |
| Gross debt | 43.3 | 47.3 | 44.7 | 41.8 | 38.6 | 38.2 | 38.8 | 39.8 | 41.1 | 44.9 |
| **Canada** | | | | | | | | | | |
| Actual balance | −5.6 | 0.1 | 1.6 | 3.0 | 1.4 | 0.8 | 1.2 | 1.0 | 1.3 | 1.5 |
| Output gap[2] | — | −0.8 | 0.6 | 2.0 | 0.4 | 0.4 | −1.1 | −1.2 | −0.8 | — |
| Structural balance | −5.4 | 0.5 | 1.4 | 2.2 | 1.3 | 0.8 | 1.8 | 1.7 | 1.7 | 1.5 |
| Net debt | 76.8 | 83.1 | 74.8 | 64.7 | 59.1 | 56.1 | 51.1 | 48.1 | 44.5 | 31.5 |
| Gross debt | 108.7 | 116.2 | 110.8 | 101.8 | 99.6 | 96.0 | 90.8 | 86.3 | 80.8 | 61.5 |

Note: The methodology and specific assumptions for each country are discussed in Box A1 in the Statistical Appendix.

[1]Debt data refer to end of year. Debt data are not always comparable across countries. For example, the Canadian data include the unfunded component of government employee pension liabilities, which amounted to nearly 18 percent of GDP in 2001.

[2]Percent of potential GDP.

[3]Data before 1990 refer to west Germany. Beginning in 1995, the debt and debt-service obligations of the Treuhandanstalt (and of various other agencies) were taken over by general government. This debt is equivalent to 8 percent of GDP, and the associated debt service, to ½ to 1 percent of GDP.

[4]Excludes one-off receipts from the sale of mobile telephone licenses (the equivalent of 2.5 percent of GDP in 2000 for Germany, 0.1 percent of GDP in 2001 and 2002 for France, 1.2 percent of GDP in 2000 for Italy, and 2.4 percent of GDP in 2000 for the United Kingdom). Also excludes one-off receipts from sizable asset transactions.

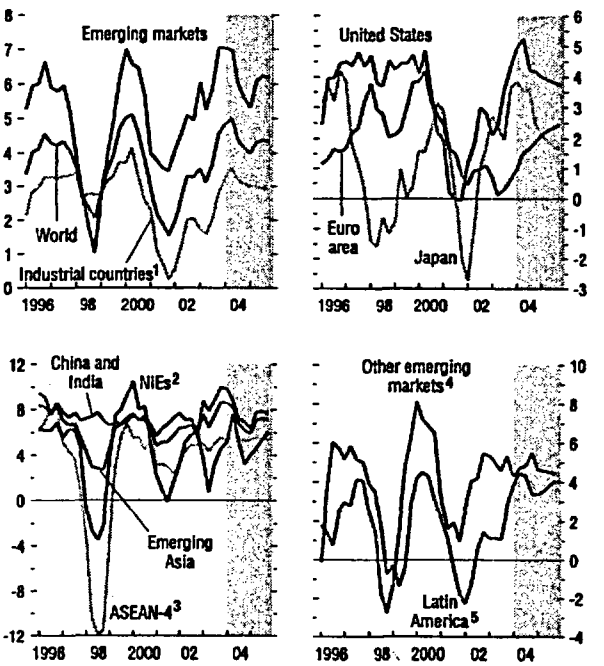
very strong inflows and historically low spreads raise concerns that markets may be somewhat complacent about the potential risks involved (see Chapter IV, "Are Credit Booms in Emerging Markets a Concern?").

- *Medium-term fiscal positions across the globe remain very difficult.* Despite the fiscal consolidation during the 1990s, many industrial countries entered the new millennium with relatively high public debt and facing looming fiscal pressures from aging populations. Over the past three years, these concerns have significantly increased, reflecting the global downturn, fiscal easing, and—despite welcome recent measures in some countries in the euro area—rather limited progress in reforming pension and health systems. Beyond the potential risks for individual countries, if unaddressed this will likely put upward pressure on global interest rates over the medium term. In emerging markets, public debt rose steadily in the second half of the 1990s, and on average is even higher than in industrial countries, although servicing capacity is generally weaker.[4] While current financing conditions remain benign, the historical evidence strongly suggests that without additional action there is a risk of widespread financing problems in the future.
- *While the Doha Round negotiations appear to be regaining some momentum, significant obstacles to achieving a meaningful agreement remain,* as illustrated by the setback at the Cancún Ministerial meeting of the World Trade Organization (WTO) in September 2003, and the recent flare-up of bilateral trade disputes (Box 1.3). With global imbalances adding to the potential for protectionist pressures, and geopolitical risks posing an additional threat to globalization, a successful completion of the round is particularly important, not least for developing countries, to which two-thirds of the potential gains would accrue. As recently noted by the IMF's Acting Managing Director

[4]See "Public Debt in Emerging Markets: Is It Too High?" Chapter III, *World Economic Outlook*, September 2003.

**Figure 1.8. Global Outlook**
*(Real GDP; percent change from four quarters earlier)*

The global recovery has strengthened and broadened, led by the United States and Asia.




Sources: Haver Analytics; and IMF staff estimates.
[1]Australia, Canada, Denmark, euro area, Japan, New Zealand, Norway, Sweden, Switzerland, the United Kingdom, and the United States.
[2]Hong Kong SAR, Korea, Singapore, and Taiwan Province of China.
[3]Indonesia, Malaysia, the Philippines, and Thailand.
[4]Bulgaria, Czech Republic, Estonia, Hungary, Israel, Latvia, Lithuania, Pakistan, Poland, Romania, Russia, Slovak Republic, Slovenia, South Africa, Turkey, and Ukraine.
[5]Argentina, Brazil, Chile, Colombia, Mexico, Peru, and Venezuela.

**Table 1.5. Selected Economies: Current Account Positions**
*(Percent of GDP)*

| | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| **Advanced economies** | −0.7 | −0.8 | −0.6 | −0.6 |
| United States | −4.6 | −4.9 | −4.2 | −4.1 |
| Euro area[1] | 1.2 | 0.6 | 0.7 | 0.8 |
| Germany | 2.8 | 2.4 | 3.1 | 2.7 |
| France | 1.8 | 0.8 | 0.3 | 0.7 |
| Italy | −0.6 | −0.9 | −0.8 | −0.5 |
| Spain | −2.4 | −2.5 | −2.9 | −2.9 |
| Netherlands | 2.5 | 2.2 | 2.6 | 2.9 |
| Belgium | 5.4 | 4.5 | 4.6 | 4.5 |
| Austria | 0.3 | −0.1 | −0.2 | −0.5 |
| Finland | 6.8 | 5.5 | 5.9 | 6.3 |
| Greece | −6.1 | −5.6 | −5.0 | −4.4 |
| Portugal | −6.7 | −5.1 | −4.4 | −4.0 |
| Ireland | −0.7 | −2.0 | −2.4 | −1.3 |
| Luxembourg | 8.2 | 5.9 | 6.9 | 8.0 |
| Japan | 2.8 | 3.2 | 3.1 | 3.2 |
| United Kingdom | −1.7 | −2.4 | −2.2 | −2.1 |
| Canada | 2.0 | 2.1 | 1.8 | 1.7 |
| Korea | 1.0 | 2.0 | 1.5 | 0.9 |
| Australia | −4.3 | −6.0 | −5.4 | −5.2 |
| Taiwan Province of China | 9.1 | 10.0 | 7.3 | 6.2 |
| Sweden | 4.8 | 6.6 | 5.9 | 6.0 |
| Switzerland | 9.6 | 9.5 | 10.1 | 10.1 |
| Hong Kong SAR | 8.5 | 11.0 | 10.3 | 9.8 |
| Denmark | 2.5 | 2.8 | 2.6 | 2.6 |
| Norway | 13.2 | 12.8 | 13.0 | 11.6 |
| Israel | −1.3 | −0.2 | 0.3 | −0.4 |
| Singapore | 21.4 | 30.9 | 28.0 | 26.7 |
| New Zealand | −3.7 | −4.5 | −5.0 | −5.0 |
| Cyprus | −5.4 | −5.0 | −4.4 | −4.1 |
| Iceland | −0.3 | −5.6 | −4.8 | −6.1 |
| *Memorandum* | | | | |
| Major advanced economies | −1.4 | −1.6 | −1.2 | −1.1 |
| European Union[2] | 0.6 | 0.2 | 0.3 | 0.3 |
| Euro area[2] | 0.9 | 0.4 | 0.2 | 0.2 |
| Newly industrialized Asian economies | 5.9 | 7.6 | 6.2 | 5.5 |

[1]Calculated as the sum of the balances of individual euro area countries.
[2]Corrected for reporting discrepancies in intra-area transactions.

Anne Krueger, "A worldwide slide back to protectionism at this juncture would represent a setback nobody wants to contemplate. It would harm the prospects for future economic growth in all countries and could even undermine what has already been achieved."[5]

Looking forward, while global policymakers need to continue to ensure that the recovery is sustained, the focus increasingly needs to shift toward medium-term issues as well as broader developmental challenges. Beyond addressing the vulnerabilities listed above, in many countries there is a need to rebuild room for policy maneuver—which permitted an aggressive response to the downturn, as well as to the events of September 11, 2001, and lately SARS—to ensure the ability to respond appropriately to shocks. In addition, a clear medium-term policy framework provides confidence to markets that underlying problems are being addressed, thereby reducing the risk of short-term turbulence. Against this background, there appear four broad policy challenges.

- *Managing the monetary policy transition.* Interest rates in almost all countries will need to rise as the recovery continues, although the near-term situation varies significantly, depending importantly on the evolving pace and nature of the recovery. In some cases—notably in the United Kingdom and Australia—the tightening cycle is under way; in others, especially those that have experienced significant exchange rate appreciation, further easing could be required. A key challenge for central banks will be to communicate their intentions as clearly as possible to the markets, thereby reducing the risk of abrupt changes in expectations later on. During this transition, as emphasized in the *Global Financial Stability Report*, regulators will need to be particularly alert to possible mispricing of risk, excessive buildup of leverage, or concentrated position taking. In the United States, despite recent very rapid GDP growth and the depreciation of the U.S. dollar, inflation is low and labor markets remain sluggish. This has given the Federal Reserve leeway to maintain a very accommodative monetary stance. However, given the buoyant short-term outlook and the need to avoid financial market disruption both domestically and abroad, the time when the Federal Reserve will need to begin raising

[5]Address by Anne O. Krueger, then First Deputy Managing Director, International Monetary Fund, to the National Institute for Bank Management, Pune, India, January 21, 2004. Available via the Internet: http://www.imf.org/external/np/speeches/2004/012104.htm.

interest rates may be approaching, and the ground should continue to be prepared for future monetary tightening. In the euro area, while inflation has been surprisingly sticky, inflationary pressures are likely to be restrained by weak domestic demand, continued wage moderation, and the appreciating currency. The benign inflation outlook and deteriorating balance of risks to growth argue for shifting policy to an easing bias; if these developments persist, a cut in policy rates would be in order. In Japan, where moderate price declines continue, the challenge is to reverse entrenched deflationary expectations. Recent increases in the Bank of Japan's operating target to support the recovery and clarification of the conditions under which monetary tightening would take place are welcome steps, but could be more effective if supplemented by further quantitative easing and a medium-term inflation target to anchor inflationary expectations.

- *Facilitating an orderly resolution of global imbalances.* At present, the constellation of policies across the major countries and regions does not appear fully consistent with an orderly adjustment over the medium term. This underscores the need for a credible and cooperative strategy that both facilitates the necessary medium-term rebalancing of demand across countries and regions, and simultaneously supports global growth as that adjustment takes place. Key elements of such a strategy should include a credible plan by the United States to restore budgetary balance (excluding Social Security) over the medium term (see the first essay in Chapter II); stepping up the pace of structural reforms in the euro area; further banking and corporate sector reforms in Japan; and a gradual shift toward more exchange rate flexibility in most of emerging Asia, combined with additional structural reforms to support domestic demand. The monetary policy strategy described above would generally be supportive of such an approach.
- *Using the recovery to address outstanding medium-term vulnerabilities.* With the recovery under way, the critical need in many countries is to make progress toward restoring sustainable medium-term fiscal positions. This is not just an issue of fiscal consolidation, although in most cases that is certainly needed. In most industrial countries, credible and high-quality measures to reform pension and health systems are even more important—and need to be taken into account in judging underlying progress—even if they do not have an immediate impact on the fiscal accounts. In emerging and developing countries, it is also essential to strengthen public debt sustainability through tax reforms to reduce revenue volatility, strengthen fiscal institutions to increase policy credibility, and take advantage of existing benign financing conditions to improve debt structure. The recovery also provides an opportunity to address other potential vulnerabilities, notably in the banking and corporate sectors, including through further progress in improving governance.
- *Reducing poverty.* While most major regions are expected to reach the target of halving poverty between 1990 and 2015 (Goal 1 of the Millennium Development Goals),[6] most African countries are likely to fall significantly short. Despite much progress toward achieving macroeconomic stability, Africa remains highly vulnerable to exogenous shocks and continues to face a daunting range of development problems, many of which cannot be addressed without strengthening weak institutions. It is therefore welcome that the New Economic Partnership for Africa's Development and the African Union are taking steps to facilitate improved governance and lower corruption in the region. In this connection, it will be particularly important that the substantial oil resources coming on stream

[6]Progress toward other key goals, however, is less encouraging. See IMF and World Bank (2004), for a detailed discussion.

## Box 1.1: The Effects of a Falling Dollar

Since its peak in early 2002, the value of the dollar has fallen by close to 20 percent in real effective terms. The largest depreciations have generally been against the currencies of other industrial countries, including the euro and the yen, while the performance against major emerging market regions has been more mixed, depreciating with respect to transition countries and (to a lesser extent) emerging Asia while appreciating against most currencies in Latin America (Figure 1.4). This box looks at the consequences of a depreciation of the U.S. dollar on the global economy, and the key issues on which it depends.

An important impact of a gradual fall in the dollar would be to reduce the U.S. current account deficit by switching external demand toward U.S. products. The depreciation of the currency makes local goods and services more competitive, increasing the demand from the rest of the world and reducing demand for foreign goods at home. This improves the external balance over time, although there can be a temporary worsening as prices of exports and imports respond more rapidly than quantities; over time, this reverses (this divergence between the short- and long-term effects is generally referred to as the J-curve, reflecting its shape). A rule of thumb is that a 10 percent depreciation in the real effective exchange rate of the dollar leads to a ½ percentage point of GDP improvement in the U.S. trade balance after two to three years. The counterpart reduction in demand and the external position in the rest of the world depends crucially, of course, on how the dollar has fared against individual currencies. For the depreciation since February 2002, the main impact is on other industrial countries.

A depreciation of the dollar also boosts the U.S. net foreign asset position and worsens positions elsewhere. Globalization has led to a rapid increase in U.S. holdings of foreign assets often denominated in other currencies and liabilities generally issued in dollars.[1] As the value of other currencies rises in relation to the dollar, assets denominated in these currencies become more valuable. It has been estimated that a 25 percent depreciation in the dollar in real effective terms could improve the U.S. net foreign asset position by 7 percentage points of GDP, a sizable change given the overall net position is that the United States owes some 25 percent of its GDP to the rest of the world.[2] The loss to the rest of the world is somewhat larger, more like 10 percentage points of U.S. GDP, as U.S. liabilities to the rest of the world significantly exceed assets. Most of these losses will affect the private sector, although there will also be significant effects on central banks with large amounts of dollar reserves. That said, the direct impact on global demand will probably be extremely limited as in most industrial countries the vast majority of wealth is held in domestic, rather than foreign, assets (emerging markets are discussed below).

The macroeconomic consequences of a gradual depreciation of the dollar, while not benign, are probably limited. The increase in demand for U.S. products will temporarily boost U.S. output compared with its potential, raise inflationary pressures, and lead to some tightening of monetary policy. There is also a direct impact on inflation as foreign goods become more expensive, although estimates of the pass-through of the exchange rate onto inflation have been falling over time—a rule of thumb for the United States is that a 10 percent depreciation of the currency adds ½ percentage point to consumer price inflation, although some recent estimates are smaller, consistent with experience over the last two years. Overall, current account reversals appear to be associated with some slowing of growth in the short term, possibly reflecting the difficulty of rotating demand from domestic to external sources.

Note: The author of this box is Tamim Bayoumi.

[1] See "Business Cycle Linkages Across the Major Advanced Economies," in the October 2001 *World Economic Outlook*.

[2] See "How Worrisome Are External Imbalances?" in the September 2002 *World Economic Outlook*.

smoothly.[3] The gradual reduction in real demand and disinflationary impulse to the countries where currencies appreciate can be offset by a monetary (or fiscal) easing. Again, however, there may be short-term disruption from the switch in demand, which could be lessened by greater structural flexibility.

The situation could become significantly more difficult, however, if the depreciation is rapid and spills over into other financial markets. Turbulence in exchange rate markets will be disruptive to trade relations and could create greater protectionist pressures. It could also temporarily increase uncertainty about the future path of the economy, causing people to postpone decisions on investment and consumption, which can reduce activity in the short term. In addition, if the depreciation reflects market concerns about the financing of the U.S. current account deficit, it could increase the risk premium on U.S. assets, which may well have effects on premiums in foreign markets, weakening activity in the United States and abroad. It could also spark greater inflationary expectations in the United States, leading to further monetary tightening by the Federal Reserve. Elsewhere, a rapid appreciation of the currency against the dollar would be particularly difficult for countries with little room for macroeconomic maneuver. Japan is a good example, as interest rates are already at their floor and the difficult fiscal situation provides little room for expansionary policies, but other countries, including many heavily indebted emerging markets, may also feel seriously constrained.

Indeed, a rise in U.S. interest rates could be particularly problematic for heavily indebted emerging market countries by increasing financial fragility, although exchange rate changes may help offset this effect. Such countries pay a significant risk premium on borrowing owing to weak balance sheets and concerns about domestic policies. Increases in U.S. interest rates can create significant domestic difficulties by reducing international liquidity and dealing a blow to balance sheets by increasing costs of repayment, thereby raising the risk premium on borrowing, although these effects could be partly or fully offset if the dollar depreciates against local currencies, as borrowing is generally in dollars and the real burden of debt thus falls. Assessing the response of emerging market exchange rates to generalize a depreciation of the dollar is complicated by the fact that weak domestic activity can lead to downward pressure on local exchange rates (this "financial accelerator" effect is discussed further in Box 2.1). Indeed, it is notable that the recent period of dollar weakness has involved appreciations of the U.S. currency with respect to several emerging market countries with large external debt.

[3]See Figure 2.5 of "How Worrisome Are External Imbalances?" in the September 2002 *World Economic Outlook*.

in the region are effectively used. Additional assistance from the international community is also critical, in the form of increased aid, continued debt relief, and—most importantly—greater access to industrial country markets.

As is clear from the discussion above, structural reforms—the theme of this edition of the *World Economic Outlook*—are key to addressing many global challenges, including raising productivity growth; reducing economic vulnerabilities; improving economies' ability to take advantage of rapid technological advances and globalization, including China's rapid emergence (see the second essay in Chapter II); and ensuring medium-term fiscal sustainability. While many countries have made progress in recent years, this has, unfortunately, often been relatively slow. This suggests the need for a closer look at the factors constraining the implementation of structural reforms in individual countries. Chapter III of this *World Economic Outlook* takes an initial look at this issue, focusing on the experience of industrial countries over the past thirty years. The chapter finds, perhaps unsurprisingly, that

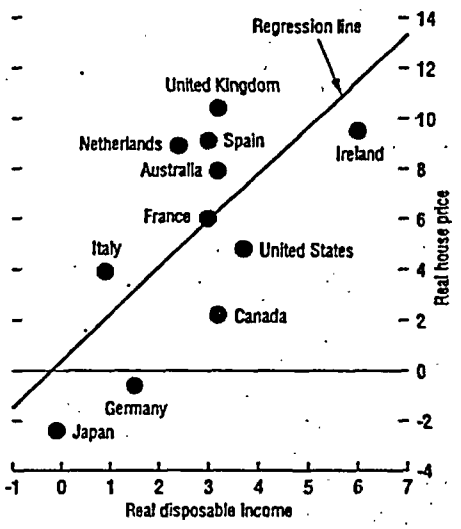
## Box 1.2. Housing Markets in Industrial Countries

The dramatic rise in residential property prices in recent years, especially in Australia, Ireland, the Netherlands, Spain, and the United Kingdom (where real house prices have risen by 50 percent or more during the last five years), has heightened concerns of an asset price bubble and thus the likelihood of a sharp price correction.[1] A sharp decline in house prices can be costly for the economy—evidence presented in the April 2003 *World Economic Outlook* suggests that housing price declines tend to be protracted and are often associated with declines in economic activity and financial instability. The macroeconomic effects can be magnified when falling house prices are triggered by rising real interest rates and households or financial institutions are vulnerable to such changes.

High house prices can be explained by a number of macroeconomic factors that have raised demand for housing. Real interest rates have declined significantly—even, at times, turning negative in some of the countries (Ireland, the Netherlands, and Spain). In addition, disposable income has grown rapidly during the past five years, especially in Ireland and the United States (see the figure). Arguably, another demand factor has been the relaxation of liquidity constraints, originating not only from lower interest rates but also from further financial market deregulation in some countries and increased competition among financial institutions in the provision of mortgages. Finally, country-specific factors—strong first-time buyer demand,[2] a weak supply response of new housing (Netherlands, United Kingdom), purchase of vacation homes by foreigners (Spain), and tax incentives (Netherlands, Spain)—have also contributed to boost prices.

**Real House Prices and Disposable Income**

*(Average growth rate, 1997–2002; correlation coefficient = 0.68)*




Sources: OECD, *Analytical database*; national sources; Office of Federal Housing Enterprise Oversight; HBOS plc; Japan Real Estate Institute; and Bundesbank calculations based on Bulwein data.

While these factors help explain the rise in demand for housing, concerns have been raised about the size of housing price increases in some countries, such as the United Kingdom and Australia. Indeed, even if the run-up in prices is justifiable on the basis of current and expected future fundamentals, a house price reversal could still be caused by deteriorating fundamentals—for example, higher interest rates, a significant rise in unemployment, and slower growth in disposable income. Were a sharp decline in housing prices to occur, there are several channels through which macroeconomic effects could be felt. House price declines can lead to falls in *residential property investment*, which has been as high as 1 percent of GDP in Australia, the Netherlands, Spain, and, particularly, Ireland. And by reducing the value of household assets, lower house prices

Note: The main authors of this box are Gian Maria Milesi-Ferretti and Laura Kodres.

[1]Commercial property price increases have been much less pronounced, but still very significant in a few countries (Ireland and the Netherlands). See Zhu (2002) for a discussion.

[2]Due to high population growth in the 25–35 age segment (Ireland, Spain) and government-introduced incentive schemes (Australia).

can lead to a decline in *private consumption* through a wealth effect. Equity withdrawal, a manifestation of higher housing wealth, has been a significant support to private consumption growth in the Netherlands, the United Kingdom, and the United States, and to a lesser extent in Australia. Estimates presented in the April 2002 *World Economic Outlook* suggest that a 10 percent decline in house prices is on average associated with a 0.5 percent decline in consumption in advanced economies.

The wealth effects on consumption can be amplified if households are financially vulnerable when a housing bust occurs, particularly when mortgage debt service is sensitive to higher interest rates (a proximate cause of house price declines), as would be the case in countries where variable-rate mortgages are predominant (such as Australia, Ireland, Spain, and the United Kingdom) and the stock of household debt is high.[3] Household debt has increased substantially as a share of disposable income (albeit not as a share of wealth) in all the countries, and is particularly high in Australia, the Netherlands, the United Kingdom, and the United States. However, the decline in interest rates has so far offset or moderated the impact of rising debt stocks on debt service.[4]

Higher interest rates together with declining house prices can also pose risks for financial stability and can feed through to investment. Such risks emanate from financial institutions' direct holdings of mortgage loans as well as from their indirect holdings through mortgage-backed securities. Despite rapidly growing securitization of mortgages, banks in countries with booming housing markets are still the predominant holders of mortgage risk, and thus face both interest rate risk and credit risk.[5] As interest rates rise, the market value of mortgage loans declines and the probability of defaults rises—with the relative effects depending on the degree to which interest payments are adjusted to the higher prevailing rates.[6] Credit risks can also arise for other reasons, such as an inability to pay owing to the household borrower becoming unemployed. If a loan becomes impaired, the property collateral underlying the loan can be used for repayment—hence, lower loan-to-value ratios provide a larger cushion to lenders in such cases.[7]

In countries with booming housing markets, banking systems are generally considered healthy; they have relatively high capital ratios, low nonperforming loan ratios (especially on mortgages), and stable profitability. Moreover, average loan-to-value ratios across the stock of mortgage loans are relatively low—below 80 percent in all countries. However, the number of loans with higher loan-to-value ratios has been growing in Ireland and the United Kingdom, and particularly in the Netherlands. The number of buy-to-let mortgages has also increased in Australia, Ireland, Spain, and the United Kingdom, suggesting a more speculative component to house purchases. Moreover, in all of these countries, variable-rate or short-term fixed-rate mortgages predominate, carrying higher default risks from interest rate rises than fixed-rate products. Although asset quality typically deteriorates slowly, financial supervisors should remain vigilant, in light of the relatively large mortgage exposures of banks, still-rising house prices, and the recent moves toward more speculative mortgage transactions.

[3]Evidence shows that the volatility of house prices is higher in countries where variable-rate mortgages are common.

[4]While the low inflation environment may increase households' ability to borrow, the associated real burden of mortgage debt service declines more slowly.

[5]Mortgage-backed securities comprise about 12 percent of residential mortgage lending in Ireland; 8 percent in the United Kingdom; 4 percent in the Netherlands; 6 percent in Spain; and 18 percent in Australia. In contrast, in the United States, mortgage-backed securities comprise 57 percent of home mortgages.

[6]Loans are not typically marked-to-market on banks' balance sheets—hence, interest rate risk on existing loans is not recognized as accounting gains or losses unless the loan is sold.

[7]Impaired loans may also require banks to increase loan provisioning and raise regulatory capital.

## Box 1.3. Risks to the Multilateral Trading System

Developments over the past year have raised some concern over the health and future direction of the multilateral trading system. The most visible setback was the disappointing outcome to the World Trade Organization (WTO) Cancún Ministerial in September 2003, where trade ministers failed to agree on modalities for negotiations that were to conclude by end-2004. It was the second WTO ministerial to collapse after the 1999 failure in Seattle, and some observers have suggested that Cancún may bode ill for the multilateral trading system. The proliferation of regional and bilateral trade agreements and a number of highly visible and contentious trade disputes have added to the perception that the architecture of the world trading system is under stress. Recent events notwithstanding, a closer look suggests that risks to the system may be overstated, but that the costs of not pushing ahead with a suitably ambitious framework for multilateral trade liberalization could be sizable, particularly for developing countries.

While the Doha Round has experienced setbacks, it has fared no worse than previous rounds. No recent trade round has proceeded without discord, and each has at some point been perceived to be in danger of collapse. The Uruguay Round, for example, which was signed in 1994, took eight years to complete, and the Tokyo Round took six years (1973–79). The agenda for the Doha Round is broader and more complex than those of previous rounds. Early GATT rounds focused primarily on tariff reductions. The agenda was significantly widened during the Uruguay Round, both in terms of sectors (agriculture, services) and rules (e.g., subsidies, intellectual property rights). The Doha Round added a number of contentious regulatory areas (e.g., investment and competition rules) and seeks to tighten commitments in the new sectors. The multilateral trading system thus increasingly touches upon societal preferences well beyond the organization of manufacturing, requiring the negotiations to be sensitive to a wide range of political and social interests.

Perhaps as important, the membership of the WTO (and its predecessor, the GATT) has undergone a significant transformation—rising from 81 countries at the beginning of the Tokyo Round to some 142 members at the beginning of the Doha Round. The heavy concentration of developing countries acceding to the WTO in recent years implies an underlying shift in priorities, while the essential mechanics of the institution have remained unchanged. Added to this is the unique character of the Doha Development Agenda, whose emphasis on the interests of developing countries sits uneasily with the concept of reciprocity—the traditional engine of WTO negotiations. Some setbacks and difficulties in achieving an ambitious and far-reaching agenda of trade reforms may therefore be understandable.

Some observers have highlighted the growing number of regional trade agreements as a potential threat to the multilateral trading system.[1] Such agreements cannot be condemned out of hand, as they can potentially promote trade creation and even establish the framework for later multilateral liberalization. But they are clearly a second-best alternative to broad-based reduction of trade barriers on a most-favored nation basis and, if poorly designed, can lead to trade diversion, administrative complexities, and a set of trade rules that compete with those under the WTO framework. The perception that they are simpler to negotiate and can bring more immediate gains also risks drawing attention and support away from multilateral negotiations, particularly for countries with limited administrative capacity.

The danger that regional and bilateral agreements pose to the world trading system is likely

Note: The main authors of this box are Hans Peter Lankes and Todd Schneider. The box was prepared in consultation with the IMF's Office in Geneva.

[1] Over 170 regional trade agreements are currently in force; an additional 70 are estimated to be operational but not yet notified. By end-2005, if the regional trade agreements planned or already under negotiation are concluded, the total number of regional trade agreements in force might well approach 300.

overstated, however. Although such agreements are indeed proliferating, they have encountered many of the same problems found at the multilateral level, as well as some of their own. Agriculture and other sensitive products, for example, remain difficult in virtually all trade negotiations. Indeed, tackling agricultural subsidies may only be realistic at the multilateral level since their reduction cannot be targeted to subsets of trade partners. This reduces the scope for negotiating trade-offs in regional agreements. Regulatory issues such as investment or government procurement rules can be contentious at the regional level as well—an important reason for the limited progress and declining ambition of the Free Trade Area of the Americas (FTAA) initiative. Implementation and enforcement have also proved challenging in the context of several of the east Asian initiatives.

While there have been increasingly contentious trade disputes, the continued use of WTO mechanisms seems to indicate trust in the rules-based multilateral trading system. The WTO's dispute settlement process, for example, continues to be widely used by the membership, although like many other institutional features it has come under close scrutiny. Its value has been confirmed, for instance, by the referral of trade disputes among members of the North American Free Trade Agreement (NAFTA), despite NAFTA having its own arbitration mechanism. Countries have also continued to demonstrate a practical recognition of the costs associated with trade disagreements, as evidenced by the U.S. decision to withdraw safeguard duties on steel imports ahead of schedule, avoiding a potentially costly trade conflict with a host of major trading partners.

Dire predictions for the world trading system are thus premature. Despite wide-ranging complaints regarding deficiencies in the WTO, there is no evidence that members are eager to abandon it. Following the setback at Cancún, there has been a crescendo of rhetoric in support of restarting the Round, together with hints at—albeit limited—substantive concessions. Nevertheless, concerns over the prospects for the Doha Round are not unfounded and call for a more serious political commitment to translate rhetoric into action.

The success of the multilateral architecture hinges not so much on the rules of the system or its institutions, but on the willingness of members to cooperate toward common objectives. The Doha Round has exposed rifts between developed and developing countries, and some frailties in the WTO's decision-making framework. In these circumstances, there is a risk that the search for agreement will yield the lowest common denominator—a watered-down agreement that would satisfy defensive interests at the cost of substantive progress on the Doha Development Agenda. The result might be disillusionment with the WTO as a mechanism for tackling the opportunities and challenges of globalization, and the increasingly active pursuit of alternative routes that risk damaging the multilateral fabric of the system. The exponential growth of bilateral and regional arrangements is, indeed, partly driven by impatience with the slow pace of the multilateral machinery. A weak result would jeopardize a critical opportunity to achieve market access goals and the reform of trade rules so as to spread the gains to those countries most in need.

reforms have generally progressed fastest in those areas that yielded most immediate benefits with the least uncertainty and less in others, notably tax and labor market reform. It also identifies a number of factors that tend to improve (or reduce) the chances of successfully implementing reforms. At the current juncture, the combination of a period of weak growth in some countries, followed now by a generalized recovery, should be propitious for advancing reforms, although the need for fiscal consolidation in many countries is a retarding factor. External factors—both external competition and international agreements, such as the European Single Market—can also be a useful spur to action.

Finally, the recent boom and bust in equity markets once again underscores the potential cost of asset price shocks in modern economies. These costs are often very large; over the past three decades, equity price busts have typically resulted in a cumulative loss of GDP of about 4 percent, while housing busts have been twice as severe. Looking forward, as financial markets become more efficient, and asset stocks continue to rise, asset price shocks may become even more important;[7] moreover—perhaps paradoxically—the achievement of sustained low inflation may increase the potential risks.[8] There is a widespread view—especially among central bankers—that monetary policy is not well suited to addressing asset bubbles, but there is little consensus on what can or should be done instead. Looking forward, this issue should be high on the agenda for policymakers and policy-oriented academic researchers. One possible approach could be a systematic review of the institutional infrastructure of asset markets, both across and within countries, to see whether specific features—for instance, constraints on housing supply, lending practices, or corporate accounting and auditing regulations—have been associated with or exacerbated bubbles in the past, to help design reforms to reduce the risk that they recur in the future.

## North America: Growth in the United States Surges; In Canada It Slows

Following a year of uncertainty and tentative recovery, the U.S. economy moved ahead strongly in the second half of 2003 as geopolitical uncertainties eased, monetary and fiscal policies remained highly stimulative, and the aftereffects of the bursting of the equity price bubble waned.[9] Real GDP grew by an exceptionally strong 8¼ percent (annual rate) in the third quarter, and by a further 4 percent in the fourth quarter. Growth was led by private consumption—which was spurred by tax cuts that boosted disposable incomes and low interest rates and the associated home refinancing boom—and a rebound in business investment as profits rose, the pressures from corporate balance sheet restructuring eased, and financing conditions improved (Figure 1.9). The employment response in this current recovery, however, has been weak by historic standards, raising fears in some quarters that the U.S. economy is in the midst of a "jobless" recovery. Nonfarm payrolls—the most commonly watched indicator of employment conditions—have until recently been very subdued, while the household survey—which has painted a somewhat stronger employment picture—remains weak relative to most other recovery periods.

Forward-looking indicators generally point to a continued robust expansion ahead, and the IMF staff has raised its growth forecast for 2004 to 4½ percent (¾ of a percentage point higher than in the September 2003 *World Economic Outlook*), and expects 4 percent growth in 2005. This forecast is predicated on further strong business investment growth and only a modest slowing in private consumption during 2004 as improving employment conditions and the rebound in equity prices largely offset the fading impact of tax cuts and home equity withdrawals.

Despite this positive economic outlook, there are still a number of uncertainties about how the recovery will develop. These include the following.

- *Will employment growth pick up as expected?* Relatively weak employment growth during this upturn may be attributable to a number of factors: the recession has encouraged firms

[7]See, for example, "Is Wealth Increasingly Driving Consumption?" in Chapter II, *World Economic Outlook*, April 2002.

[8]When inflation is high, nominal wages tend to rise rapidly as well, so that the ratio of interest payments to income drops sharply over time. When inflation is low, debt service ratios decline more slowly, so that borrowers are much more exposed to shocks.

[9]Evidence suggests that the bursting of a typical equity price bubble shaves about 4 percentage points off growth over a two- to three-year period following the peak (see Chapter II, *World Economic Outlook*, April 2003).

# CHAPTER II THE GLOBAL IMPLICATIONS OF THE U.S. FISCAL DEFICIT AND OF CHINA'S GROWTH

This chapter consists of two essays: the first examines the global implications of the U.S. fiscal deficit, while the second analyzes the impact on the world economy of China's emergence.

Specifically, the first essay investigates the potential medium-term impact of the U.S. budget deficit on economic activity in the rest of the world, global long-term interest rates, and the U.S. dollar. The essay finds that the U.S. fiscal expansion has so far provided important support to the global recovery without apparent adverse effects on long-term interest rates, but that there are reasons to be concerned that this cannot last. At some point, as U.S. government debt rises, the beneficial effects will almost certainly be eroded through some combination of withdrawal of fiscal stimulus and higher long-term interest rates. The latter concerns are particularly important for emerging market economies with high levels of foreign currency–denominated debt, as such countries are particularly sensitive to higher global real interest rates. The results presented in the essay suggest that, with growth in both the United States and global economies accelerating, a phased withdrawal of fiscal stimulus over the next few years, in a manner that pays due attention to incentives to work and invest in the United States, would be a sensible and prudent way to balance short- and long-term economic goals.

The second essay evaluates the global impact of China's rapid growth and continuing integration into the world economy. Although China's experience so far is broadly in line with previous historical episodes of rapid integration, including the post–World War II experiences of Japan, the Asian newly industrialized economies (NIEs), and ASEAN-4 countries, in the long run China is likely to play a much larger role in the global economy as its per capita income levels catch up with other emerging market economies in the region. While China itself clearly stands to gain the most from its growth, the impact on the rest of the world as a whole will also be beneficial, although likely smaller than the impact of other prospective global changes, such as multilateral trade liberalization, over the next decade or two. In particular, advanced economies will benefit from cheaper labor-intensive imports and greater demand for skill-intensive exports, while developing countries will see increased opportunities for exports to China, both of primary commodities and of manufactures for re-processing and re-export. However, countries whose factor endowments are similar to China's, and which compete most closely with it in world markets, will need to undertake sizable adjustments and display flexibility in product and labor markets, in order to avoid significant losses. In general, to maximize the gains from China's emergence, countries will have to increase the flexibility of their economies through structural reforms and speed up their own integration into the global economy. The advanced economies could significantly help any countries affected adversely by removing constraints on world trade, for instance in agricultural products.

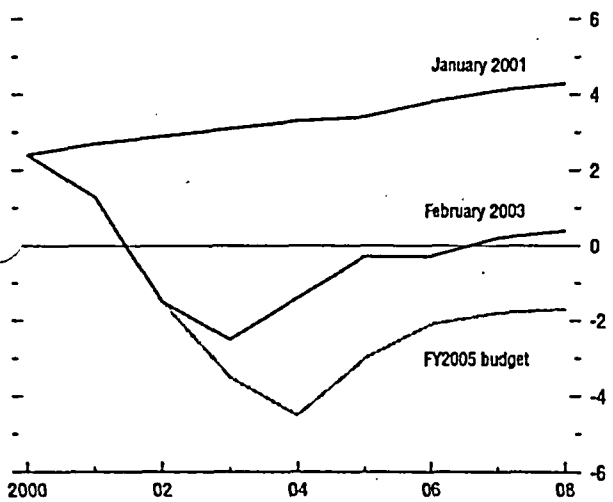
## How Will the U.S. Budget Deficit Affect the Rest of the World?

*The main author of this essay is Nicoletta Batini. Ercument Tulun and Sarma Jayanthi provided research assistance.*

Between 1992 and 2000, U.S. real output and aggregate demand grew rapidly, propelling the global economy. The favorable cyclical position and prudent fiscal policies led to a strong fiscal outlook, while higher productivity growth and a rapidly advancing stock market resulted in an investment boom and an expansion of the U.S. external deficit. From mid-2000, however, the

**Figure 2.1. United States: Fiscal Balance**
*(Percent of GDP; fiscal years)*

From an extremely strong position in FY2000, the U.S. fiscal outlook has deteriorated rapidly.




Sources: FY2001, FY2003, and FY2005 budgets of the U.S. government.

U.S. and global economy weakened significantly, following one of the largest stock market declines in the postwar period, the terrorist attacks of September 11, 2001, major corporate failures, and the war in Iraq. Active fiscal policies by the federal government to help restart the U.S. economy, together with extraordinary military and security-related spending linked to the war on terror, as well as the cyclical move from high to low growth, have resulted in a 7 percentage point deterioration in the U.S. ratio of budget deficit to GDP relative to FY2000—the largest such deterioration over such a short time span since World War II and equal to about 6 percent of world gross savings. Interest rates, however, have remained low as monetary policy has been accommodative and global investment tepid. The U.S. fiscal position is expected to remain in deficit for the next several years.

To date both the United States and the rest of the world have benefited from the U.S. fiscal stimulus. It has had a positive impact on U.S. output and foreign output—as the United States has increased imports from the rest of the world—without yet putting significant pressure on long-term interest rates. The U.S. fiscal expansion provided important support for global demand at a time when monetary policies—particularly in the United States and Japan—were already stretched. In its absence, the global recovery would most probably not have been as strong and broad as it has been in practice. However, many observers, including IMF staff, have expressed concern about the medium-term effects of the U.S. fiscal expansion, pointing to the potential implications of sustained and large U.S. fiscal deficits for global interest rates, productivity and income—especially as monetary policy returns to a more neutral stance and investment revives—as well as for the U.S. current account deficit, which has reached record-high levels, and the value of the U.S. dollar going forward. This essay discusses these issues by addressing the following questions.

- What will be the medium-term impact of the U.S. budget deficit on economic activity in the rest of the world?

**Table 2.1. Cumulative Percentage Point Contributions to Budget Turnaround**

| | 2000–04 |
|---|---|
| Tax cuts | –2.5 |
| Higher spending[1] | –2.1 |
| Cyclical factors | –1.5 |
| Losses in revenue buoyancies | –0.7 |
| Total | –6.8 |

Source: Congressional Budget Office (2003a).
[1]Discretionary spending, debt service, and other legislation.

- What are the consequences of the higher U.S. public debt, current account deficit, and net foreign liabilities for the U.S. dollar and, eventually, world economic activity?
- Are there specific consequences for emerging market economies from the current U.S. fiscal outlook?
- Can the United States avert the future undesired consequences of its fiscal policies, and if so how, given what we know from similar fiscal episodes in the past?

## How Worrisome Is the U.S. Fiscal Outlook?

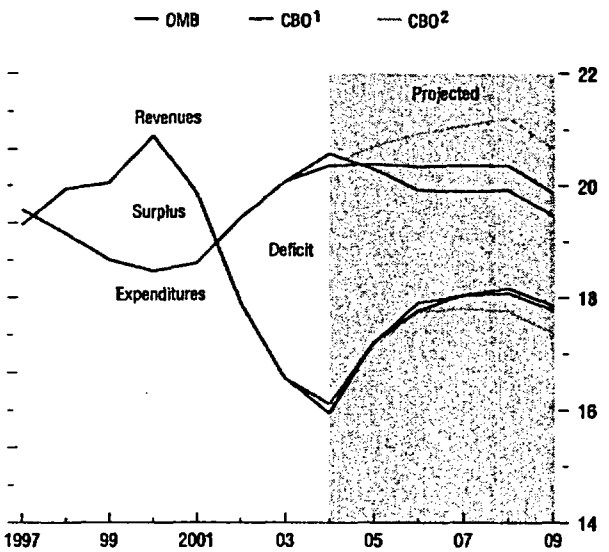
From an extremely strong position in fiscal year 2000, the U.S. fiscal position has deteriorated rapidly (Figure 2.1). The U.S. federal government's unified budget has shifted from a surplus of 2½ percent of GDP ($236 billion) in FY2000 to an estimated deficit of 4½ percent of GDP ($521 billion) in FY2004.[1] This reflects, in approximate order of importance, tax cuts, higher discretionary and nondiscretionary spending, cyclical factors, and, finally, losses in revenue buoyancies from capital gains taxes following the burst of the equity bubble in the late 1990s (see Table 2.1).

In the five years after 2004 the U.S. Administration projects that the deficit will fall to roughly half its FY2004 level (Figure 2.2). This projected decline is predicated on a series of somewhat optimistic assumptions about government operations, including a comeback in rev-

[1]For a detailed analysis of recent U.S. fiscal policies see Mühleisen and Towe (2004).

**Figure 2.2. United States: Fiscal Risks**
*(Percent of GDP; fiscal years)*

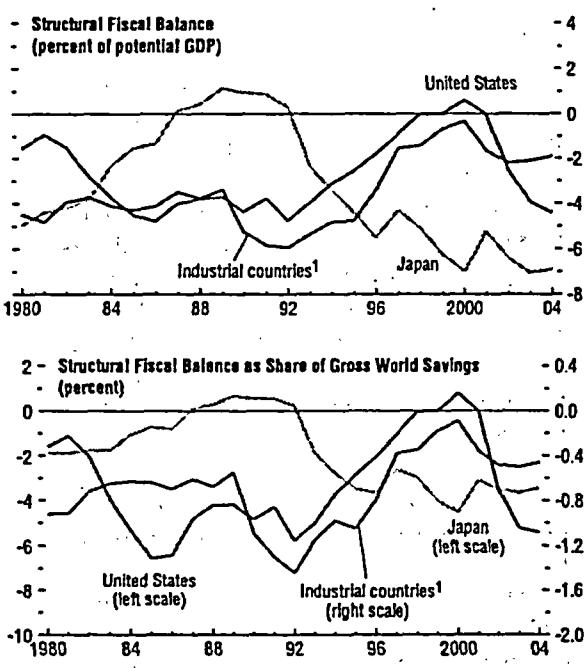
In the five years after 2004 the U.S. Administration projects a halving of the fiscal deficit, but the Congressional Budget Office has a more pessimistic view.




Sources: FY2005 budget of the U.S. government (OMB); and Congressional Budget Office (CBO).
Note: All fiscal balance numbers are expressed as percent of GDP, while GDP figures are IMF estimates.
[1]CBO 2004 baseline adjusted by extending expiring Economic Growth and Tax Relief Reconciliation Act (EGTRRA) and Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA) tax provisions.
[2]CBO 2004 baseline adjusted by extending expiring Economic Growth and Tax Relief Reconciliation Act (EGTRRA) and Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA) tax provisions, and assuming a reform of the Alternative Minimum Tax as well as an increase in discretionary appropriations by the rate of inflation after 2004.

**Figure 2.3. Structural Fiscal Balances of Advanced Countries**

With the exception of Japan, today the deterioration in the fiscal position is largely limited to the United States, unlike in the 1980s. The current U.S. budget deficit is about 6 percent of world gross savings.




Source: IMF staff calculations.
1Canada, France, Germany, Italy, and the United Kingdom.

enue buoyancies, no reform of the Alternative Minimum Tax (AMT)—which is neither indexed for inflation nor adjusted to compensate for the recent tax cuts and will affect a growing number of people—no costs to U.S. taxpayers of peacekeeping operations in Iraq beyond FY2004, and a strict containment of non-defense and non-homeland-security-related spending in the coming years. Clearly, if these assumptions did not materialize, the fiscal outlook would turn out to be considerably worse. The Congressional Budget Office (CBO), for example, has provided estimates of the path of the deficit if real discretionary spending per capita (including defense and homeland security) were held constant and Congress amended the AMT, while leaving other administration assumptions unchanged. They project that under this scenario actual U.S. fiscal deficits—instead of halving—would stay close to their current level as a ratio to output over the next decade (Figure 2.2).[2] Of course, the fiscal outlook also depends on the growth of activity and hence could improve if productivity growth exceeds expectations in the coming years. From a historical perspective, the speed of deterioration in the deficit has few parallels. The budget turnaround from FY2000–04 as a ratio to GDP is the fastest in the past fifty years and nearly double the previous worst four-year setback since the Korean War. In level terms, the current federal deficits are large but not unprecedented as a ratio to GDP. The projected deficit in FY2004 is similar in magnitude to those seen in the mid-1980s following the tax cuts embodied in the Economic Recovery Tax Act of 1981, when a phased reduction in personal income tax rates starting in 1982 and boosts to military expenditures increased the U.S. structural deficit (Figure 2.3). The large shortfalls of the mid-1980s continued into the 1990s, despite more optimistic

[2]To aid comparability with the administration's Office of Management and Budget (OMB) estimates, Figure 2.2 also shows CBO (2004) baseline estimates adjusted only by extending expiring tax provisions from the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA) and from the Jobs and Growth Tax Relief Reconciliation Act of 2003 (JGTRRA).

projections by the administration at the time. They eventually disappeared following a series of painful efforts to impose fiscal rules intended to reduce and then eliminate budget deficits.

This experience suggests that a sustained effort may be required to reduce the current U.S. fiscal deficit. Whether this task will prove more or less difficult than in the 1980s and 1990s depends on both the relative size of today's and previous deficits and on the U.S. current conjuncture relative to that back then. On the positive side, today the U.S. economy looks potentially stronger than in the 1980s, and, with the exception of Japan, the deterioration in the fiscal position is largely limited to the United States, although the situation elsewhere is inevitably somewhat mixed (Figure 2.3). On the negative side, however, pressures on the budget are likely to increase steadily over coming years owing to the retirement of the baby boom generation, which will commence in 2012, and to greater longevity, increasing the urgency of consolidation.[3] Moreover, today the external position of the United States is weaker, involving record-high current account deficits and rapidly growing net foreign liabilities, and so it is more vulnerable to changes in sentiment in exchange rate markets.

## What Is the Impact of a U.S. Fiscal Expansion?

A fiscal expansion in the United States can affect the world economy through four key channels. First, it boosts economic activity at home and abroad via a demand-side effect, the so-called short-run "fiscal multiplier." The impact on activity depends on the composition of the expansion and the resulting upward pressures on interest rates and the exchange rate, which will tend to be smaller if the monetary authorities accommodate the fiscal stimulus. Second, over the medium term, the imbalance either reduces private consumption (because higher private saving is needed to make up for public dissaving) or lowers private investment, or both, through a mechanism called crowding out. The eventual cost is lower global productivity growth and income. Third, changes in tax rates affect U.S. incentives to work and save. Finally, the expansion puts further pressure on the U.S. current account position in the short term, and creates a need to service higher U.S. debt and debt payments to the rest of the world over time, which erodes the value of the dollar, lowering consumption in the United States and increasing it elsewhere. These four channels, and their relative importance, are briefly discussed below.

### *Short-Run Fiscal Multipliers*

A fiscal expansion implemented through tax cuts and higher government spending raises disposable income and directly expands aggregate demand via increases in government consumption. As the extra income gets spent, demand rises by a multiple of the initial increase, the so-called "fiscal multiplier." While there is a wide range of estimates of the size of this multiplier (0.1–1.6), partly reflecting a range of technical assumptions (including the response of monetary policy), typical results from both recent regression exercises and large macroeconomic models (summarized in Tables 2.2 and 2.3, respectively) suggest that the impact of a fiscal expansion is significantly positive; it is generally larger for government spending increases than tax cuts; and it wears off over time. In addition, multicountry models also suggest that about one-fourth to one-half of the impact on the United States spills over to the rest of the world.

These findings have been complemented by a large literature that looks at how the size, composition, and initial conditions of the fiscal shock affect the size and sign of the short-run fiscal multipliers.[4] This literature, which focuses on the impact of fiscal contractions as experienced

[3]The CBO has projected that federal spending on Social Security, Medicare, and Medicaid will rise from 9 percent of GDP in 2010 to 14 percent in 2030 (CBO, 2003b). IMF staff estimates based on an intergenerational accounting framework predict analogous increases (see Cardarelli and Towe, 2004).

[4]For a review of this literature see, among others, Alesina and Ardagna (1998).

**Table 2.2. Effects of Fiscal Policy on Output (VAR Estimates)**

| | | Spending Multipliers | | | Tax Multipliers | | |
|---|---|---|---|---|---|---|---|
| Study | Sample | Impact | Peak[1] | Long-term | Impact | Peak[1] | Long-term |
| Blanchard and Perotti (2002) | 1960–97[2] | 0.8 | 1.3 (15) | 1.0 | 0.7 | 0.8 (5) | 0.2 |
| | 1960–77[1] | 0.9 | 0.9 (1) | 0.7 | 0.7 | 1.3 (7) | 1.3 |
| Fatás and Mihov (2001) | 1960–99 | 0.1 | 0.3 (16) | 0.2 | ... | ... | ... |
| Mountford and Uhlig (2002) | 1955–2000 | 0.2 | 0.5 (3) | ... | 0.2 | 0.4 (9) | ... |
| Perotti (2002) | 1960–2000 | 0.4 | 1.1 (15) | 1.0 | 0.3 | 0.8 (7) | 0.5 |
| | 1960–79 | 0.7 | 1.6 (10) | −0.6 | 0.4 | 1.1 (13) | 0.8 |
| | 1980–2000 | 0.1 | 0.5 (3) | −1.3 | 0.2 | 0.2 (1) | 0.1 |

[1]Figures in parentheses are calendar quarters after impulse when peak response occurs.
[2]Assuming stochastic trend for output.

**Table 2.3. Estimates of Multipliers from Macromodel Simulations**

| | | Multipliers | | | |
|---|---|---|---|---|---|
| | | United States | | Rest of the world | |
| Study and Model(s) | Simulation | Short-term | Long-term | Short-term | Long-term |
| Bryant and others (1988) (various models) | Sustained increase in real government consumption of 1 percentage point of GDP | 1.2 | 0.65 | 0.6 | 0.3 |
| | Sustained increase in personal income taxes of 1 percentage point of GDP | −1 | 1 | −0.5 | 0.5 |
| Dalsgaard, André, and Richardson (2001) (OECD INTERLINK) | Sustained increase in government consumption of 1 percentage point of GDP | 1.1 | 0.1 | 0.55 | 0.05 |
| | Sustained reduction in personal income taxes of 1 percentage point of GDP | 0.6 | 0.3 | 0.3 | 0.15 |
| WEO May 1996 (MULTIMOD) | Sustained reduction in government consumption of 1 percentage point of GDP | −1.1 | 0.6 | −0.55 | 0.3 |
| | Sustained increase in personal income taxes of 1 percentage point of GDP | −0.7 | 0.2 | −0.35 | 0.1 |
| Reifschneider and others (1999) (FRB/U.S.) | Sustained increase in government consumption of 1 percentage point of GDP | 1.4 | 1.1 | 0.7 | 0.55 |
| | Sustained increase in personal income taxes of 1 percentage point of GDP | −0.4 | −1.5 | −0.2 | −0.7 |
| Oxford World Macroeconomic Model (2000) | Sustained increase in government consumption of 1 percentage point of GDP | 1.2 | 0.3 | 0.6 | 0.1 |
| | Sustained increase in personal income taxes of 1 percentage point of GDP | −1.4 | −0.6 | −0.7 | −0.3 |

by European countries in the 1990s, indicates that the negative effects on activity are smallest when changes in the fiscal stance are credible and incentive friendly. This suggests that the size of the multipliers of today's U.S. fiscal expansion may ultimately depend on the credibility of planned future consolidations and on the ultimate impact on incentives.

*Crowding Out*

Sustained fiscal deficits lower national savings in the United States, creating an imbalance between total savings and investment, and eventually raise real interest rates both in the United States and abroad, thus crowding out global private investment. The extent to which this occurs depends on four main factors. First, a higher deficit may cause consumers to raise saving in expectation of higher taxes at some point in the future, an effect that both lowers the size of the short-term fiscal multiplier and reduces the need for a subsequent adjustment in private saving and investment, thus lowering crowding out. Second, much depends on the relative sensitivity

**Table 2.4. Estimates of Effect of FY2004 Budget Proposals from Small-Scale Models**
*(Average change in GDP from CBO's baseline, percent)*

| | 2004–08 | 2009–13 |
|---|---|---|
| Textbook growth model | −0.2 | −0.7 |
| Closed economy life-cycle growth model | | |
| Lower government consumption after 2013 | −0.3 | −1.5 |
| Higher lump-sum taxes after 2013 | 0.5 | 0.3 |
| Open economy life-cycle growth model | | |
| Lower government consumption after 2013 | −0.6 | −0.5 |
| Higher lump-sum taxes after 2013 | 0.3 | 0.6 |
| Infinite horizon growth model | | |
| Lower government consumption after 2013 | 0.2 | −0.6 |
| Higher lump-sum taxes after 2013 | 0.9 | 1.4 |

Source: Congressional Budget Office (2003c).

of consumption and of investment to the real interest rate. If consumption is not very sensitive to real interest rates compared with investment, crowding out will be stronger as higher real interest rates are needed to curb consumption, and so investment falls by more. Third, the final extent of crowding out also depends on how monetary policy responds to the fiscal expansion. If the fiscal stimulus is accompanied by easy monetary conditions, as is currently the case in the United States, the rise in real interest rates may not materialize fully at the beginning, and so crowding out will be smaller initially—although rates will eventually have to rise as inflation starts increasing after the fiscal-monetary expansion. Fourth, if international asset markets are closely linked, part of the crowding out will be transferred to the rest of the world through higher foreign real interest rates.

Model-based evidence supports the existence of a significant degree of crowding out. For example, a CBO study (CBO, 2003c) using a variety of macroeconomic models found that the FY2004 budget proposals would lower GDP between ½ and 1½ percent below baseline during 2009–13 (Table 2.4). A number of empirical studies also find a significant impact of fiscal deficits on real interest rates, although the range of estimates is wide (Table 2.5). This evidence on the impact of deficits is broadly consistent with Elmendorf and Mankiw (1999), who examine the effect of a rise in the debt-to-GDP ratio on real interest rates, and with Gale and Orszag (2002), who survey a number of large macroeconomic models.

The impact on the rest of the world depends crucially on the degree to which U.S. and foreign asset markets are linked and hence foreign real interest rates rise following a U.S. fiscal expansion. Evidence suggests that over time changes in U.S. interest rates feed through about one-to-one to foreign interest rates, implying that, in the long run, the rest of the world is

**Table 2.5. Selected Studies on the Impact of Deficits on Real Interest Rates**

| | Crowding-Out Effect (basis points)[1] | Interest Rates Considered | Fiscal Variable | Business Cycle Regressor |
|---|---|---|---|---|
| Laubach (2003) | 23 | 10-year treasury bond yield expected over the next 5 years | CBO 5-year-ahead forecast | No |
| Laubach (2003) | 36 | 5-year treasury bond yield expected over the next 5 years | OMB 5-year-ahead forecast | No |
| Laubach (2003) | 9 | 10-year treasury bond yield | CBO 5-year-ahead forecast | No |
| Canzoneri, Cumby, and Diba (2002) | 60 | Slope of yield curve (10-year note less 3-month bill) | CBO 5-year-ahead forecast | No |
| Canzoneri, Cumby, and Diba (2002) | 40 | Slope of yield curve (10-year note less 3-month bill) | CBO 10-year-ahead forecast | No |
| Elmendorf (1993) | 49 | Change in 3-year treasury bond yield | DRI forecast of deficit-to-GDP ratio | Unemployment rate |

[1]Increase in interest rates caused by a 1 percentage point rise in the deficit-to-GDP ratio.

**Table 2.6. Correlations of G-7 Real Interest Rates (1977–2002)[1]**

| | Canada | Germany | United Kingdom | Japan | United States | France | Italy |
|---|---|---|---|---|---|---|---|
| Canada | 1 | | | | | | |
| Germany | 0.7 | 1 | | | | | |
| United Kingdom | 0.6 | 0.4 | 1 | | | | |
| Japan | 0.7 | 0.7 | 0.5 | 1 | | | |
| United States | 0.6 | 0.3 | 0.5 | 0.5 | 1 | | |
| France | 0.6 | 0.5 | 0.6 | 0.7 | 0.5 | 1 | |
| Italy | 0.7 | 0.5 | 0.7 | 0.5 | 0.5 | 0.8 | 1 |
| World | 0.8 | 0.8 | 0.7 | 0.8 | 0.6 | 0.8 | 0.8 |

Source: OECD.
[1]Interest rates are 12-month Euromarket interest rates deflated by the same period CPI inflation rate. The world real interest rate is the simple average of national rates.

affected in a similar manner to the United States. Correlations between real interest rates for industrialized countries are all positive, significant and sizable, suggesting the existence of a "world" real interest rate (Table 2.6).[5] These estimates suggest that the 15 percentage point increase in the U.S. public debt ratio projected over the next five years by the CBO could increase global real interest rates by ½ percentage point or more,[6] dampening global consumption and reducing capital accumulation in the rest of the world in a similar manner to the United States.

The implications of higher U.S. real interest rates go beyond crowding out, particularly for countries whose access to global financial markets is less secure (see Box 2.1). Emerging markets, particularly those with high levels of external debt indexed to U.S. interest rates, are directly affected through higher cost of finance and worsened fiscal positions. In practice, the cost of finance generally rises by more than the increase in U.S. interest rates as the increase in the debt burden weakens financial conditions and raises risk premia. Even in the absence of explicit indexing, fiscal positions in these countries can deteriorate as global interest rates increase and money tends to flow toward safer assets. Finally, higher U.S. interest rates increase financial fragility in these countries as they can potentially trigger capital outflows.[7]

*Incentives to Work and Save*

The negative effects of crowding out can be mitigated to the extent that tax cuts reduce distortions that affect the labor market and firms' decisions to invest and so generate supply-side benefits.[8] The size of these effects is again an area of significant uncertainty—estimates from the literature, reported by the Council of Economic Advisers, suggest that the proposed tax cuts could generate potential gains between 2 and 6 percent of GDP in the medium term (Council of Economic Advisers, 2003). Others, however, suggest that the incentive effects are much smaller, and in any case many of the supply-side-friendly elements of the tax cuts announced in the 2001 administration's proposal—such as the elimination of double taxation of corporate income—were watered down in the legislative process.[9] More fundamentally, if budgetary consolidation through spending

[5]See Helbling and Wescott (1995), Ford and Laxton (1999), Orr and Conway (2002), and Mühleisen and Towe (2004).
[6]For a discussion, see the staff report on the latest Article IV consultation with the United States (IMF, 2003).
[7]The Latin American debt crisis of the 1980s is a dramatic example of the links between U.S. interest rates and emerging markets' finances.
[8]See Chapter III for further evidence on the impact of comprehensive tax reforms on growth.
[9]Angrist (1991) and Blundell, Duncan, and Meghir (1998) suggest the incentive effects of taxes on work are small (for broader surveys, see Pencavel, 1986, 2002). Likewise, it has been argued that the effect on investment from reducing taxes on dividends may be negligible because increased dividend payouts could reduce funds available for new capital spending (Gale and Orszag, 2003).

## Box 2.1. How Do U.S. Interest and Exchange Rates Affect Emerging Markets' Balance Sheets?

As discussed in the main text, increases in the U.S. fiscal deficit have an impact on the rest of the world through a variety of real sector channels, in aggregate tending to raise output in the short term but depressing it over the medium term, as global interest rates rise. For emerging market economies, however, the changes in U.S. interest rates and exchange rates induced by U.S. fiscal deficits can generate additional short-term effects through a range of financial channels. Notably, higher U.S. interest rates tend to reduce net capital inflows into emerging markets (see, for example, Calvo, Leiderman and Reinhart, 1996); worsen fiscal positions, since much emerging market public debt is indexed to U.S. or world interest rates;[1] and—in emerging markets where exchange rates are linked to the dollar—lead to intervention that tightens monetary conditions.

In addition, changes in U.S. interest rates and exchange rates can have important effects on private sector balance sheets in emerging market economies, through a mechanism called the "financial accelerator." The financial accelerator works broadly as follows. Lenders to firms in emerging market countries are uncertain about the ability of borrowing firms to repay loans and so they ask borrowers to post collateral, in the form of real or financial assets, when lending to them. If a shock—such as a U.S. fiscal expansion—raises real interest rates, this reduces both domestic demand in emerging market countries and the value of the collateral that has been posted. In response, lenders increase the premiums on their loans, raising the cost of both old and new borrowing to firms, who correspondingly cut investment back, further exacerbating the downturn (the "financial accelerator effect"). The same mechanism operates in reverse if interest rates fall. Since lenders to firms in the emerging market country generally prefer to lend in dollars—a phenomenon called "original sin"[2]—there is also an important role for the exchange rate. Shocks that lead to an appreciation of the U.S. dollar—and thereby a depreciation of the emerging market's currency—tend to worsen the corporate balance sheets of emerging markets, especially when these have borrowed in dollars and produce goods for domestic markets—which can again lead to a rise in risk premia and exacerbate an economic contraction.

Against this background, the impact of a sustained 1 percent increase in the U.S. fiscal deficit—achieved through a tax reduction—leading to a 10 percentage point rise in the debt-to-GDP ratio over the medium term on emerging markets is examined, using simulations of a two-country quarterly U.S.–emerging market model embodying a financial accelerator mechanism extended here to incorporate explicitly a fiscal sector.[3] The emerging market model is parameterized to represent a prototypical Latin American country with an average corporate leverage ratio (i.e., firms' average ratio of total liabilities to total assets) of 50 percent. In addition, it is assumed that external debt is 50 percent of GDP and exports are 20 percent of GDP. To illustrate the impact of the exchange rate channel, two different simulations are run assuming that emerging market external debt is either denominated entirely in local currency (blue lines in the figure) or entirely in U.S. dollars (red lines).

In both cases the rise in the U.S. budget deficit initially raises U.S. consumption and output, and reduces U.S. investment through the usual crowding-out mechanism. The fiscal deficit opens a differential between U.S. and foreign real interest rates leading initially to an appreciation of the dollar. As the budget returns

Note: The main authors of this box are Nicoletta Batini and Simon Gilchrist.

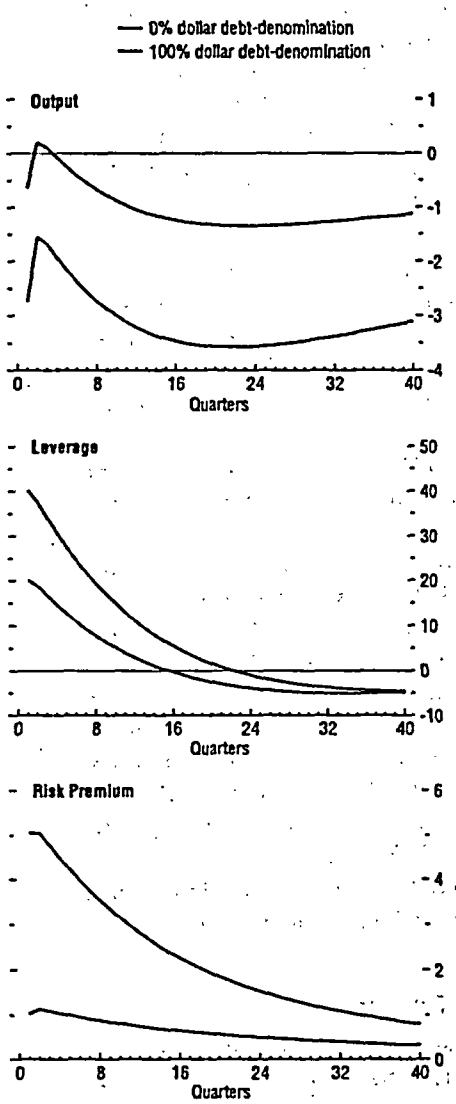
[1]This can happen even in the absence of explicit indexing (see Calvo, 2001).

[2]For simplicity, the analysis assumes that emerging market countries have flexible exchange rates and so ignores the additional implications of changes in the dollar for emerging markets with dollar pegs.

[3]The model replicates that in Gilchrist, Hairault, and Kempf (2002) based, in turn, on an open-economy version of the financial accelerator model by Gertler, Gilchrist, and Natalucci (2003).

**Box 2.1 *(concluded)***

**Emerging Markets: Output, Leverage, and Risk Premium**
*(Percent deviation from baseline)*




Source: IMF staff calculations.

to balance over time, the interest rate differential disappears and the exchange rate depreciates to maintain uncovered interest rate parity.

Eventually, economic activity in both regions returns to trend. Given the financial accelerator effect, the fall in activity in the emerging market country is larger than in the United States, since the risk premium on emerging market borrowing rises as balance sheets deteriorate, particularly when external debt in the emerging market country is denominated in dollars. In that case, the initial appreciation of the dollar further deteriorates the corporate sector balance sheet in emerging markets—in our experiment, corporate leverage (denominated in dollar terms) in these markets increases by 40 percent more than in the baseline case—and causes a 5 percentage point increase in the cost of external finance. As a result, the contraction in investment and output in the emerging market country is more than twice as large as in the local currency debt denomination case. This effect of course goes into reverse as the U.S. dollar depreciates over the longer term.

These results are sensitive to a number of assumptions. First, much depends on the situation of the corporate sector before the shock: the higher the leverage or the greater the financial frictions, the stronger the impact of the financial accelerator. Second, in the model all corporate debt is of short maturity. However, if firms in emerging market countries can borrow long term, the effect shown here could be mitigated. Finally, openness is also critical. The greater the share of trade in GDP, the less the exchange rate needs to move in response to a given external shock, and the smaller the impact on balance sheets.

This analysis would seem to have two implications regarding the impact of the U.S. fiscal deficit on emerging markets.

- To date, as discussed in Chapter 1 of this *World Economic Outlook*, financing conditions for emerging markets have been very favorable, as the impact of higher U.S. fiscal deficits has not yet been seen in interest rates, in part reflecting cyclical factors. However, with U.S. interest rates likely to rise in the future, financing conditions are likely to deteriorate, and the impact would be exacerbated

by the financial accelerator effect described above.

- Although the U.S. dollar effective exchange rate has been depreciating since early 2002, currencies in emerging markets that are more prone to adverse financial accelerator effects—notably in Latin America, which includes many nations relatively closed to trade and highly indebted to external lenders—have depreciated against the dollar (Figure 1.4 in Chapter 1), with presumably negative consequences for their corporate balance sheets. Were this dollar trend to reverse, there would be a correspondingly positive impact on these emerging market countries' corporate balance sheets, which could partially offset the impact of higher U.S. interest rates.

cuts is not fully credible, there remains the possibility that tax increases may be needed in the future to close the deficit, eroding the incentive benefits over time.

### *Foreign Debt and the Dollar*

A U.S. fiscal expansion is generally thought to lead to an appreciation of the dollar, since it causes foreign capital to flow in in response to higher U.S. interest rates, and leads to a weaker external position as some of the increase in domestic demand is satisfied from abroad.[10] In the medium term, however, the story is reversed as the exchange rate starts depreciating to rebalance the current account deficit and generate surpluses to meet the additional costs of the higher net foreign liabilities accumulated during the fiscal expansion. Evidence for such a negative medium-term relationship between movements in net foreign liabilities and the real exchange rate can be found in Obstfeld and Rogoff (2001), Gagnon (1996), and Lane and Milesi-Ferretti (2002). In addition, the prospect of a higher foreign debt in the future can weaken the exchange rate even in the short term if it diminishes foreign investors' appetite for U.S. assets. As discussed in Chapter I, the prospect of continuing large U.S. fiscal and external deficits and the implied external borrowing adds to concerns about international imbalances, increasing the chances of a disorderly resolution, including a rapid fall in the value of the dollar and a rise in U.S. long-term interest rates.

Increases in U.S. long-term interest rates and abrupt changes in the value of the dollar could be especially damaging for emerging market economies with large external debt loads denominated in U.S. dollars, since they affect these countries' balance sheets and thus add to their intrinsic macroeconomic volatility and difficulty in servicing and repaying their debts. This is particularly true when corporate balance sheets in these countries are weak and trade openness is limited so that it is difficult to earn needed foreign exchange through exports and imports (the consequences for emerging markets of rises in U.S. real interest rates and changes in the value of the dollar are discussed in Box 2.1).

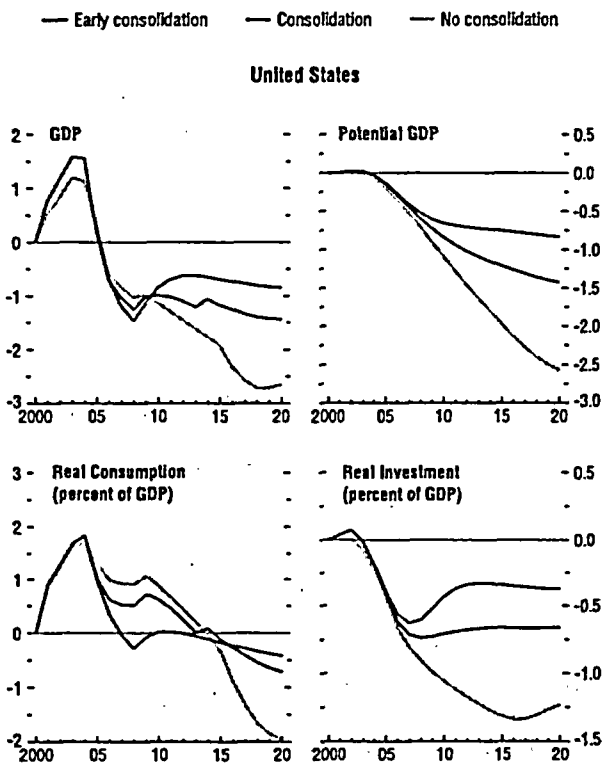
## Putting It All Together

This section attempts to quantify the potential effect of the U.S. fiscal expansion on both the United States and the rest of the world. The IMF's Multi-Region Econometric Model

[10]Following the emergence of "twin deficits" in the 1980s, many studies have looked at the relationship between fiscal policy, the exchange rate, and the current account, but no consensus has emerged, with some studies finding no causal link between budget and trade deficits (e.g., Evans, 1989; and Dewald and Ulan, 1990), and others concluding that the fiscal deficit is a prime determinant of the trade deficit (e.g., Bernheim, 1988; Miller and Russek, 1989; and Enders and Lee, 1990).

**Figure 2.4. Main Simulation Scenarios**
*(Percent deviation from baseline)*

The medium-term impact on U.S. actual and potential output depends largely on the plans for future consolidations, with an earlier one giving best prospects going forward.




(MULTIMOD, described in Laxton and others, 1998) is used for this purpose. MULTIMOD incorporates most of the key channels discussed above—fiscal multipliers, crowding out, and the medium-term impact of changes in U.S. net foreign liabilities on real exchange rates—with parameter values that are around the midpoint of the ranges discussed above.[11]

That said, there are two potential drawbacks to using MULTIMOD:

- *Incentive effects on work are not included in the baseline model.* While the benefits of lower taxes on capital are incorporated in the model (although, like many macroeconomic models, it does not include detailed features of the tax system such as the double taxation of saving), the labor force is assumed to be unresponsive to changes in tax rates. To examine the potential role of such incentives, a version of the model was built in which the labor force was made sensitive to the tax rate.
- *The model lacks an emerging market countries bloc.* Accordingly, Box 2.1 reports results using a model that incorporates a wide range of features that could be important in the transmission of a U.S. fiscal shock to emerging markets, such as financial frictions and currency mismatches in balance sheets.

As an additional check on the robustness of the MULTIMOD results, Box 2.2 reports some simulations from a prototype fiscal model being developed at the IMF that incorporates explicit microeconomic foundations. The new model brings to the fore links between the expected path of the real exchange rate, consumption, and hours worked. The results on the medium-term effects of a fiscal consolidation are fairly similar to those in MULTIMOD. The short-term multipliers are smaller than MULTIMOD's as

[11]MULTIMOD's fiscal sector and parameters are described in Laxton and others (1998). In MULTIMOD, the implied rise in U.S. real interest rates from a fiscal expansion is close to the midpoint of other estimates, as are the responses of the real exchange rate, net foreign assets, and the sensitivity of trade to the real exchange rate (which help determine the response of the current account).

the prototype model currently assumes that prices are fully flexible, thereby limiting the channels through which aggregate demand affects real output.

We consider three main scenarios.[12] The first and most pessimistic scenario (yellow line, Figure 2.4) looks at the potential results of failing to control the budget over the medium term, as occurred in response to the fiscal expansion in the 1980s. The simulations replicate the 5 percentage point of GDP structural fiscal expansion that has happened in the United States post-FY2000 and assume that monetary policy remains accommodative until late 2004, following a Taylor (1993)–type interest rate policy rule thereafter. This causes a deficit path similar in size to the post-2000 budget turnaround, which is then assumed to be maintained through the end of the decade before being withdrawn at the same rate and in the same manner as it was introduced.[13] The fiscal stimulus results in a boost to real output in the United States and other industrial countries, with output rising some 1½ and ½ percent above baseline by 2004 respectively, largely reflecting the jump in U.S. consumption from higher disposable incomes. The model confirms, therefore, that without the U.S. fiscal stimulus, U.S. and global growth over the past few years would have been significantly lower.[14]

Subsequently, the positive effects of the shock wane as both short- and long-term interest rates rise to make up for the loss in government saving and for the rise in private consumption from higher government debt, and to rein in inflationary pressures from higher aggregate

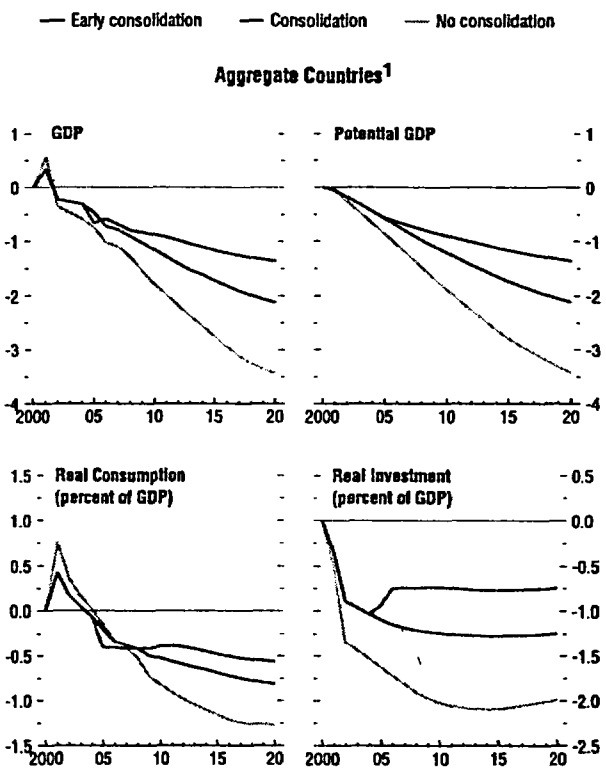
[12]Throughout, results are reported in terms of deviations from baseline. Results are not particularly sensitive to the choice of the baseline, which is, in this case, a recent World Economic Outlook forecast.

[13]The model cannot be solved with permanent deficits, so it is assumed that taxes are raised from 2010 onward to stabilize the government debt as a ratio of GDP. Most projections, however, assume that the tax cuts will not expire in the future, in line with policy statements.

[14]The analysis of the stimulus provided by the U.S. fiscal expansion of course hinges on a variety of assumptions, including the monetary and exchange rate response.

**Figure 2.4** ***(concluded)***

The short-term impact on the rest of the world of a U.S fiscal expansion is small, while the medium-term losses are large. An early U.S. consolidation could minimize future costs abroad of the current U.S. expansion.




Source: IMF MULTIMOD simulations.
[1]Industrial countries include Canada, France, Germany, Italy, Japan, the United Kingdom, and small industrial countries.

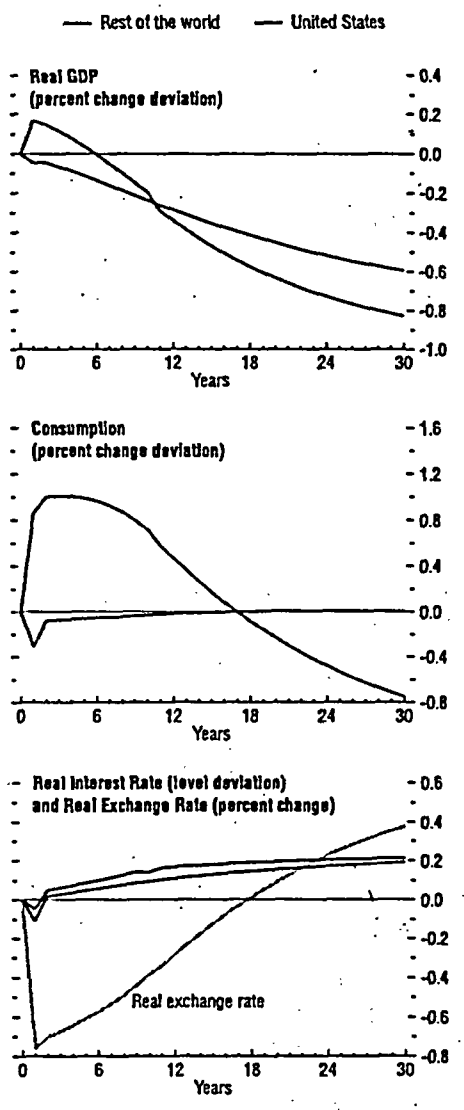
## Box 2.2. The Effects of Tax Cuts in a Global Fiscal Model

This box provides an alternative perspective to the MULTIMOD simulations presented in the main text by considering the effects of a tax cut in a prototype version of the Global Fiscal Model (GFM), which is similar in spirit to the Global Economy Model (GEM) recently developed in the IMF's Research Department.[1] Like GEM, GFM is a dynamic general equilibrium model with strong microeconomic foundations but, as the name implies, it is specifically designed to examine fiscal issues, including medium-term and long-run multipliers, crowding out, and the effects of tax distortions. Key structural parameters determining the magnitude of these effects are the sensitivity of hours worked to changes in the after-tax real wage, the desire of consumers to smooth their consumption over time, and consumers' planning horizon.

GFM is calibrated such that the home economy reflects the United States. To provide a comparison with MULTIMOD, the base-case model assumes labor supply to be fairly unresponsive to changes in after-tax real wages. Unlike MULTIMOD, however, the current experimental version of GFM features flexible prices, reducing aggregate demand channels and hence short-term multipliers. The implications of a 10-year, 1-percentage-point (of GDP) tax cut in the United States are reported in the figure. The tax cut is assumed to fall completely on labor income. After the tenth year, labor income taxes are assumed to adjust to stabilize the government-debt-to-GDP ratio at its new value, which is 15 percentage points above its baseline value when the impact of higher interest payments is taken into account.

The tax cut results in a short-term expansion of U.S. output with a multiplier of 0.2, which then gradually declines and turns negative after six years. As anticipated, the short-term multiplier is smaller than that in MULTIMOD, although the effects on output last longer. The rise in consumption is prolonged by the expected depreciation of the real exchange rate,

**One-Percentage-Point of GDP Tax Cut in the United States for 10 years**
*(Deviation from baseline)*




Source: IMF staff calculations.

Note: The main authors of this box are Dennis Bounan and Douglas Laxton.

[1]GEM is described in Box 4.3 in the April 2003 *World Economic Outlook*.

**One-Percentage-Point of GDP Tax Cut in the United States for 10 Years: Sensitivity Analysis**

| | | United States | | | Rest of the World | | |
|---|---|---|---|---|---|---|---|
| Scenario | Variable | Impact | First 10 years (average) | Long run | Impact | First 10 years (average) | Long run |
| Baseline | GDP | 0.2 | — | −1.0 | — | −0.1 | −0.8 |
| | Consumption | 0.9 | 0.9 | −1.3 | −0.3 | −0.1 | −0.1 |
| | Real interest rate | −0.1 | 0.1 | 0.2 | −0.1 | — | 0.2 |
| Strengthening supply-side effects[1] | GDP | 0.6 | 0.6 | −1.9 | 0.1 | −0.1 | −1.4 |
| | Consumption | 0.8 | 1.2 | −2.2 | −0.1 | −0.1 | −0.4 |
| | Real interest rate | −0.1 | — | 0.3 | −0.1 | — | 0.3 |
| Increasing the effects of deficits on interest rates[2] | GDP | 0.2 | −0.1 | −1.7 | −0.1 | −0.2 | −1.4 |
| | Consumption | 1.2 | 1.0 | −1.6 | −0.2 | — | −0.3 |
| | Real interest rate | 0.1 | 0.1 | 0.4 | −0.1 | 0.1 | 0.4 |
| Making the savings rate more sensitive to future tax increases[3] | GDP | 0.1 | — | −0.3 | — | 0.0 | 0.0 |
| | Consumption | 0.3 | 0.2 | −0.9 | — | −0.1 | 0.3 |
| | Real interest rate | — | 0.0 | — | 0.0 | — | 0.0 |

Source: IMF staff estimates.
[1]Base-case model, but the labor supply is elastic.
[2]Base-case model, but the intertemporal elasticity of substitution is lower.
[3]Base-case model, but consumers have a longer planning horizon.

leading individuals to take advantage of lower prices on foreign goods now compared to later. The real exchange rate depreciates to generate positive trade balances to finance the higher interest burden on the stock of net foreign liabilities. Over time, higher tax rates and real interest rates in response to higher government debt crowd out consumption and investment, resulting in a reduction in U.S. GDP of about 1 percent in the long run even though, as consumption falls, its marginal benefit increases, causing consumers to enjoy less leisure.

The multiplier in the rest of the world is negligible as the path of increasing real interest rates crowds out investment, offsetting the gains from the improvement in the trade balance. Consumption falls initially and then steadily returns to its original level owing to the anticipated appreciation of the real exchange rate despite long-term crowding out of a similar magnitude in the United States.

In three alternative scenarios the sensitivity of these base-case results to the key parameters of the model were examined (see the table):

- Strengthening supply-side effects. Increasing the incentive effects of tax cuts amplifies and prolongs the short-run expansion in the U.S. economy as workers respond to the temporary lower tax rates by increasing their labor effort and firms increase investment to raise their capital stock. As in the MULTIMOD scenario, these stronger supply-side responses increase the short-term output multiplier and the effects are prolonged. This, however, is reversed when taxes are eventually raised to finance the interest burden on the higher level of government debt, resulting in larger negative consequences in the long run. For the rest of the world, the tax cut is more expansionary because there is less crowding out of investment and workers increase their labor effort although, as in the United States, there are larger losses in the long run.
- Increasing the effects of deficits on interest rates. Reducing the sensitivity of consumption to changes in the real interest rate implies a short-term multiplier of about the same size as in the base case. Higher real interest rates cause a larger fall in investment, but this is offset by a larger increase in consumption as individuals indulge in more consumption

**Box 2.2 *(concluded)***

smoothing. A larger increase in real interest rates is required in the long term to equilibrate saving and investment, implying greater long-run crowding-out effects in the United States and the rest of the world, as in the MULTIMOD scenario.

- *Making the savings rate more sensitive to future tax increases.* Lengthening the planning horizon of consumers results in a smaller short-run boost to consumption and a reduced short-term multiplier as individuals are more sensitive to the prospect of higher tax liabilities in the future. The long-run crowding out effects are likewise smaller because real interest rates rise by less and hours worked remain higher as consumption and leisure are positively linked in the long run. The negative impact on the rest of the world is smaller because there is less crowding out of investment.

The GFM simulations provide a similar qualitative picture to that provided by MULTIMOD, although the short-term multipliers are reduced because prices are currently assumed to be fully flexible. The stronger microeconomic structure permits some additional insights into the effects of the tax cut. In particular, there are two interactions that the GFM simulations highlight. First, there is a link between the expected future path of the real exchange rate and consumption, with U.S. consumers spending more in the short term to take advantage of temporarily low prices of imported goods, while consumers in the rest of the world do the opposite. Second, there is a long-term negative link between consumption and hours worked as workers balance their benefits from using goods with the disutility of working more. As a result, U.S. workers not only consume less but also work harder in the long term.

demand.[15] This crowds out U.S. consumption and private investment, gradually reducing U.S. potential output to about 2 percent below baseline by 2015. These losses in productive potential are more than replicated in other industrial countries as foreign real interest rates gradually rise to match the increase in their counterparts in the United States. Despite the fact that the falls in productive potential in the United States and abroad are not too dissimilar, U.S. consumption falls by more than in the rest of the world in the long run. This is because higher U.S. international interest payments erode the value of the dollar, allowing the rest of the world to obtain U.S. goods cheaply while raising the price of their own goods to people in the United States. These terms-of-trade effects mean that U.S. consumers experience a larger loss in welfare than their counterparts in the rest of the world.

The second scenario (red line, Figure 2.4) involves the same fiscal expansion followed by a gradual consolidation of the type envisaged by the U.S. Administration in the FY2005 budget—namely, tax cuts are maintained, losses in revenue buoyancies from the stock market crash are reversed, and spending is trimmed.[16] Taken

[15]Over the long term, the increase in government debt raises interest rates by about 100 basis points.

[16]More specifically, the simulation assumes that lower taxes reduce revenues by about 2½ percent of GDP, phased in at slightly over ⅓ percentage point increments over 2001–03 and phased out after 2010 at the same rate. In contrast to taxes, consolidation on the spending side is assumed to occur from 2005. Direct purchases of government goods and services are assumed to increase gradually up to a peak of 1 percent of GDP in 2004, and then decrease gradually to zero with increments/decrements of ⅓ of a percent of GDP starting in 2005. Other government spending is assumed to increase in equal increments over 2001–03 to a peak of 1¼ percent of GDP above baseline in 2004 and is phased out starting from 2005 in equal decrements. This consolidation largely reflects restraints on discretionary spending but, in addition, some allowance has been made for technical factors, including a recovery in revenue buoyancies. Taken together, these assumptions broadly replicate the deterioration of some 5 percentage points of GDP in the structural fiscal deficit seen since 2000. After 2010, taxes are assumed to rise above baseline to stabilize the government's debt position.

**Table 2.7. MULTIMOD Alternative Scenarios**

| Scenario | | GDP | | Consumption | |
|---|---|---|---|---|---|
| | | United States | Rest of world | United States | Rest of world |
| No consolidation | Impact | 0.52 | 0.56 | 1.17 | 1.22 |
| | Peak | 1.20 | 0.56 | 2.32 | 1.22 |
| | Long-run | −3.68 | −4.20 | −6.34 | −2.14 |
| Consolidation | Impact | 0.75 | 0.34 | 1.24 | 0.68 |
| | Peak | 1.57 | 0.34 | 2.46 | 0.68 |
| | Long-run | −1.88 | −2.55 | −2.89 | −1.44 |
| Early consolidation | Impact | 0.75 | 0.34 | 1.24 | 0.68 |
| | Peak | 1.57 | 0.34 | 2.46 | 0.68 |
| | Long-run | −1.03 | −1.47 | −1.54 | −0.88 |
| Risk premium shock | Impact | 0.75 | 0.34 | 1.24 | 0.68 |
| | Peak | 1.57 | 0.34 | 2.26 | 0.68 |
| | Long-run | −1.85 | −2.49 | −2.87 | −1.40 |
| Endogenous labor supply | Impact | 1.16 | 0.27 | 1.60 | 0.52 |
| | Peak | 2.16 | 0.27 | 2.90 | 0.52 |
| | Long-run | −2.08 | −2.04 | −2.89 | −1.23 |
| Lower interest rate sensitivity of consumption | Impact | 0.69 | 0.81 | 0.67 | 2.12 |
| | Peak | 1.49 | 0.81 | 1.90 | 2.12 |
| | Long-run | −2.78 | −4.08 | −3.69 | −2.99 |

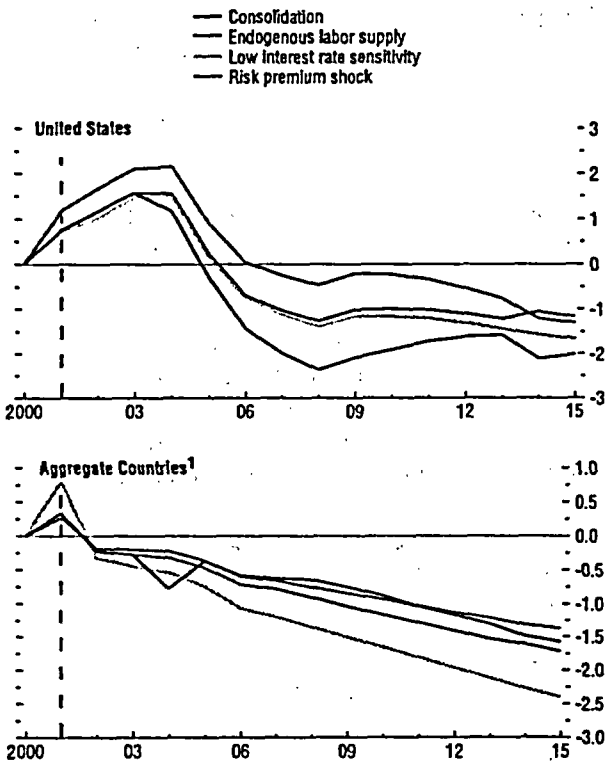
together, these assumptions involve a halving of today's budget deficit by FY2009. The short-term boost to output is similar to the earlier experiment, reflecting the fact that different assumptions about the subsequent course of fiscal policy have little impact on short-term multipliers. The gradual consolidation has a mildly negative impact on real output later this decade, but the difference in the level of real output between the two scenarios never exceeds ¼ percent of GDP as the medium-term weakening effects on output are partially offset by smaller crowding-out effects when the rise in government debt is lessened. In this case, the longer-term losses in output capacity through crowding-out effects are reduced by about one-half in the United States, with a broadly similar reduction in the rest of the world.

A third scenario (blue line, Figure 2.4) considers the consequences of reversing the fiscal expansion at a faster rate than envisaged by the administration. More precisely, it is assumed that from FY2005 onward the fiscal stimulus is withdrawn at the same rate it was introduced, with the structural deficit returning to its earlier path by about FY2008. Such a scenario involves mildly lower real output over 2005–08, on the order of ¼ percent less than the more gradual consolidation path envisaged by the administration, while cutting the long-term negative impact on potential output in the United States and the rest of the world by about three-fourths.

These scenarios assume that there are no adverse disturbances in the future and no sudden shifts in the willingness of foreign investors to hold dollar assets. One clear consequence of higher U.S. fiscal deficits is to reduce the macroeconomic room for maneuver in the face of subsequent negative disturbances in the U.S. economy. In addition, the risk of a fall in confidence by international investors is clearly larger if they have a more pessimistic view about the rate at which U.S. deficits will be reduced. To investigate the consequences of an abrupt shift in sentiment, a variation on the second scenario was also created, involving a 15 percent reduction in the value of the dollar in 2004 combined with an expectation that U.S. inflation would rise by 1 percentage point for the next five years (results from this new scenario are reported in Table 2.7). The increase in inflationary expectations and rise

**Figure 2.5. GDP in Alternative Scenarios**
*(Percent deviation from baseline)*

Higher tax sensitivity of labor supply mitigates the impact of the fiscal shock on the United States, but not on the rest of the world. Lower interest rate sensitivity of consumption worsens prospects for all, while a risk premium shock is particularly penalizing for the United States.




Source: IMF MULTIMOD simulations.
[1]Industrial countries include France, Germany, Italy, Japan, the United Kingdom, and small industrial countries.

in dollar prices of foreign goods necessitates a hike in interest rates with adverse consequences on U.S. output in both the short term—as aggregate demand is deflated—and medium term—as crowding out is increased. The short-term impact on the rest of the world is small where monetary policy is flexible and is able to offset the adverse nominal exchange rate shock on demand. However, output falls significantly in the short term in countries where macroeconomic policies are constrained, such as Japan.

Two more scenarios were run to examine the sensitivity of the results of the second main scenario (which reflects the views of the U.S. Administration) to alternative assumptions about the importance of tax cuts on work and about the sensitivity of consumption and investment to real interest rates. Results from these scenarios are also summarized in Table 2.7, and are plotted in Figure 2.5 and discussed below.

- *Supply-side effects may turn out to be greater.* To capture the potential benefits of tax incentives, U.S. labor supply was made dependent on tax rates using a coefficient at the upper end of available estimates from microeconomic studies. Hence, while the main three scenarios embed a relatively pessimistic view about the impact of incentive on work effort, this alternative embeds an optimistic one. The positive impact on labor supply increases short-term multipliers and mitigates crowding-out effects in the United States (U.S. output remains ¾ percent above the scenario without these effects through 2010). The long-term consequences, of course, depend crucially on whether the fiscal consolidation required to reverse the expansion and cover the significantly higher interest payments on debt occurs through lower spending or higher taxes. The negative impact on other industrial countries remains similar to the scenario without such incentive effect, as the boost to U.S. labor also increases demand for capital in the United States, producing a similar increase in global real rates.
- *Deficits have a larger impact on interest rates.* Consumption was made less sensitive to real

interest rates by reducing MULTIMOD's intertemporal elasticity of substitution on consumption from 0.4 to a value of 0.3, close to the lower bound of plausible empirical estimates. This has little impact on short-term responses, but significantly increases the crowding out of investment and hence the negative impact on potential output. This is because interest rates have to increase by more to achieve the same fall in overall spending, putting relatively more pressure on investment spending.

Finally, Box 2.1 examines the consequences for emerging markets of a sustained increase in the U.S. deficit of 1 percentage point of GDP. The results illustrate the crucial importance of movements in U.S. real interest rates for such countries. The key channel is the rise in U.S. real interest rates, which causes a rise in risk premia and affects emerging markets' exchange rates with respect to the dollar. Both these effects, in turn, erode already weak balance sheets, with adverse consequences for activity. In the case where all debt is denominated in dollars and the country is relatively closed to trade, these effects almost fully offset the beneficial effects on activity from short-term fiscal multipliers, while increasing crowding out over the medium term. The risk of a negative effect on emerging markets through high real interest rates becomes less pervasive if the country borrows in domestic currency or is more open to trade by reducing balance sheet vulnerabilities. Although few such effects have been evident to date, the risks of negative effects on emerging markets are linked to market perceptions about prospects for the U.S. deficit, as discussed earlier in the context of other asset market spillovers, and so may materialize unexpectedly.

## Policy Implications

To date, the U.S. fiscal expansion has supported the recovery from recessions in the United States and elsewhere without apparent adverse effects on long-term interest rates. This expansion provided significant support for the global economy over recent years. However, there are reasons to be concerned that this cannot last. At some point, the support for activity will almost certainly be eroded through some combination of withdrawal of stimulus and/or higher long-term interest rates, as the U.S. government debt rises. Likewise, the large U.S. current account deficit, exacerbated by the effect of the fiscal stimulus on U.S. domestic demand, will have to be rebalanced. As emphasized in Chapter I, achieving an orderly resolution of U.S. and indeed global imbalances requires a cooperative strategy that includes medium-term fiscal consolidation in many industrial and emerging market economies; greater currency flexibility, especially in most of emerging Asia; a faster pace of pro-growth structural reforms in the euro area and Asia; and further banking and corporate reforms in Japan. For the United States, the crucial issue is how to ensure that the withdrawal of stimulus does not weigh too heavily on the global recovery while limiting the erosion in long-term productive potential through higher interest rates, further falls in the dollar, and increasing risks of an adverse financial market response. The latter concerns are particularly important for emerging market economies with large levels of debt denominated in foreign currencies, as such countries are particularly sensitive to higher global real interest rates or to the value of the dollar.

The analytical results presented in this essay confirm that the U.S. fiscal stimulus supported growth in the United States and abroad in recent years, and suggest that significant benefits could now be obtained from a more ambitious consolidation path over the medium term than the one that has been proposed by the U.S. Administration. In particular, the losses in output from such a withdrawal of stimulus will probably be mitigated by the lower degree of crowding out of productive potential through higher real interest rates. In addition, the longer consolidation is postponed, the larger the increase in government debt and debt service, increasing the size of future cuts in noninterest spending or increases

in revenues needed to stabilize the fiscal position, limiting room for maneuver in response to unexpected events, and complicating preparation for the fiscal pressures from an aging population. With both the United States and the global economy in recovery mode, a phased withdrawal of fiscal stimulus over the next few years in a manner that pays due attention to incentives to work and invest in the United States would seem to be a sensible and prudent way of balancing short- and long-term economic goals.

## China's Emergence and Its Impact on the Global Economy

*The main authors of this essay are Nikola Spatafora, Yongzheng Yang, and Tarhan Feyzioğlu. Paul Atang provided research assistance.*

Over the past 20 years, and after a long period of isolation, China's role in the global economy has increased sharply. Its GDP has grown at an average annual rate of over 9 percent, while its share of world trade has risen from less than 1 percent to almost 6 percent. As a result, China is now the sixth-largest economy (at market exchange rates) and the fourth-largest trader in the world. Not only have its exports gained significant market share abroad, but its rapidly rising imports have supported the strong performance of neighboring economies and contributed to the recent strength in world commodity prices.

China's economic weight and its integration into the world economy are likely to continue increasing rapidly, as the necessary structural reforms (including in the financial and enterprise sectors, labor markets, and social safety nets) are implemented (Feyzioğlu and Wang, 2003). While the effect on the world as a whole is likely to prove positive, the impact could vary considerably across countries, industrial sectors, and socioeconomic groups. For instance, while industrial-country exports to China, particularly of skill- and technology-intensive items, are likely to continue increasing rapidly, certain sectors may undergo job losses as Chinese firms' market share expands. Similarly, some developing countries facing increased Chinese competition may experience an erosion of their market share for unskilled-labor-intensive manufactures. In addition, rapid growth in China may significantly increase world prices for some commodities, including agricultural products and energy.

The purpose of this essay is accordingly to investigate the likely impact of China's continued emergence, to identify who will reap the largest opportunities and who may have to bear the heaviest adjustment burden, and to discuss the policies required to maximize the benefits while minimizing the adjustment costs. The essay focuses on the following questions.

- How does China's growth and integration experience so far compare with previous historical episodes of rapid integration?
- How will China's integration affect the rest of the world? What structural characteristics determine whether a country will gain or suffer from China's growth?
- How can individual countries maximize their gains from China's emergence? What can the international community do to help any losers?

### Stylized Facts

To assess China's likely impact in the future, it is instructive to systematically compare China's integration experience with previous episodes of rapid integration. In particular, it is of interest to compare the Chinese experience over the past quarter-century with that of Japan, the NIEs, and the ASEAN-4 during their own integration phases, when output and exports first started exhibiting sustained growth.[17]

[17]The NIEs consist of Hong Kong SAR, Korea, Singapore, and Taiwan Province of China. ASEAN-4 consists of Indonesia, Malaysia, the Philippines, and Thailand. For China, integration is defined as starting in 1979, when major economic reforms began. For all other regions, integration is defined as starting when the three-year moving average of constant-price export growth first exceeded 10 percent: 1955 for Japan, 1967 for the NIEs, and 1973 for the ASEAN-4.