Re-Balancing Act:
Global Imbalances in a Changing World

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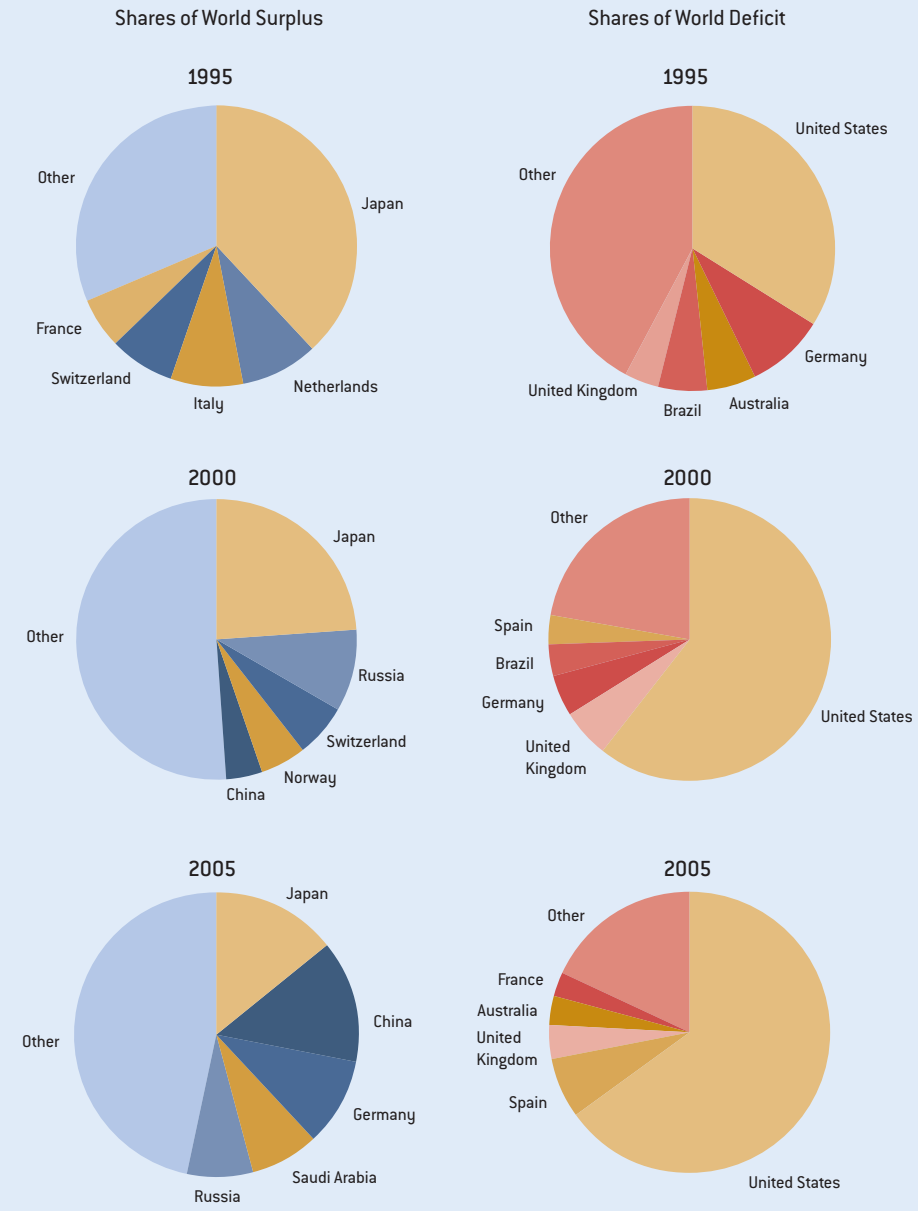
The world has been confronting unusually large current account imbalances[1] for so long now that international policy makers have almost stopped warning that these represent a major risk to the world economic outlook. Almost – but not quite. Seeking to avoid crying wolf, many analysts continue to include disruptive-adjustment scenarios involving sharp dollar depreciation, financial market crises, and global slowdowns in their published forecasts. But now they place these scenarios in boxes, outside the main text, where the reader can easily ignore them.

How big a threat do these imbalances actually represent to the global economy? And how did these imbalances develop – with the United States, on one side, accounting for the bulk of the global deficit and a more variable group – currently Japan, Germany, China, and OPEC – accounting for the bulk of the global surplus (Figure 1)? This arrangement means that the United States has consumed more than it has produced and invested more than it has saved for over 15 years now. Equivalently, our trading partners, some of whom are very poor on a per capita basis, have willingly lent us, a wealthy country, the funds needed to import the resources to fill the gap – now equal to about 6 percent of our GDP (Figure 2). If the United States were a developing country, such behavior would have triggered a crisis long ago. But, of course, the United States is not a developing country.

In assigning blame, foreign policy makers tend to highlight American policy "mistakes" as having led to a decline in public and household saving rates in this country, while U.S. policy makers tend to point to Asian countries' "ill-advised" decision to manage their currencies in terms of the dollar. Such a dollar peg has led, they claim, to too much production with too little domestic

The author thanks Selva Bahar Baziki and Adrienne Hathaway for their excellent research assistance and substantive suggestions. She also thanks Ann Eggleston and Elizabeth Murry for their helpful editorial insights. The essay draws upon and summarizes the views of participants in the Bank's 51st economic conference. The author is indebted to these participants for their valuable perspectives; she remains solely responsible for any misinterpretations.

Figure 1 Global Current Account Imbalances 1995, 2000, and 2005



Source: IMF World Ecoonomic Outlook, September 2006.

consumption – a global savings "glut," in other words, although some observers see an investment dearth instead.

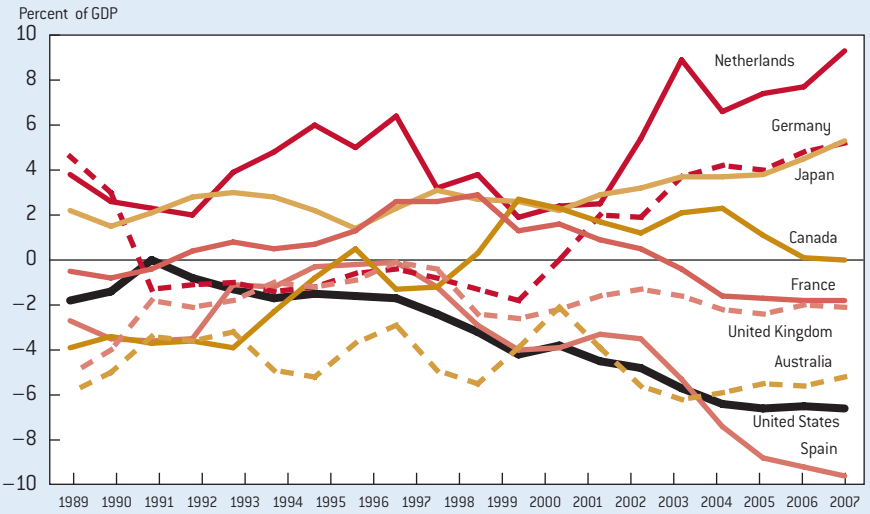
But cyclical imbalances are generally short-lived, and policy mistakes are usually quickly punished. By contrast, persistent imbalances may reflect something more fundamental than short-run policy mistakes. Such enduring imbalances may more likely reflect a major structural shift in the distribution of the world's resources associated with the arrival of the New Giants – China, of course, but also India and the ex-Soviet bloc countries – as key players in the global economy. In particular, the recent addition of hundreds of millions of Chinese and Indian workers to the globally active labor force represents a significant re-weighting of world labor markets. In addition, Japan and Germany – and China with a lag – are stepping into an unprecedented demographic future of secular population decline. In scope and significance, these global resource shifts are not unlike the flows of capital and labor that accompanied the European migrations to the New World and the colonization of India and other regions in earlier periods. (See sidebar on page 10 for the economic importance of

the emerging giants.)

But in contrast with these previous episodes, this time around the capital flows are heading the "wrong way" – from fast-growing developing countries, where returns on investment might presumably be high, to mature wealthy countries. Is this situation sustainable? Simply stabilizing the U.S. current account deficit at its present level relative to GDP would require foreign investors to add U.S. assets worth about 6 percent of U.S. GDP to their portfolios year after year – an uncertain proposition.[2] But if these imbalances do turn out to be sustainable, is that outcome desirable? If not, will adjustment occur smoothly or in response to a crisis? How concerned should policy makers be? Current opinion runs the gamut from "Apocalypse Now" to Panglossian equanimity. What are the potential policy implications?

In response to these puzzles and concerns, the Federal Reserve Bank of Boston organized a conference on "Global Imbalances – as Giants Evolve" in June 2006. Our hope in gathering academics, financial market participants, and policy makers from around the globe was to gain a better understanding of the fundamentals explaining these imbalances and to identify policy responses that might help ease the way to a smooth adjustment. This essay summarizes the conference presentations and discussions. (See box on page 12 for a list of conference presenters. Their names are italicized when they appear in this essay.)

Figure 2 Current Account Balances as a Percent of GDP
Selected OECD Countries, 1989 to 2007*



* 2006 data are preliminary; 2007 data are OECD projections.
Source: OECD Economic Outlook 80 Database.

Déjà Vu?

A wave of international activity between 1870 and 1913 is often characterized as the "First Globalization" and represents another time when technological, economic, and political

Such enduring imbalances… likely reflect a major structural shift in the distribution of the world's resources…

Economic Importance of the Emerging Giants

by Selva Bahar Baziki

By what criteria does one measure an emerging giant? Or determine which countries deserve that title? Everyone agrees that China tops the list – by almost any gauge.[1] But at the Boston Fed conference, *Shankar Acharya* and *Richard Cooper* argued that India should not be "clubbed" with China because India is less globally engaged and contributes little to current payments imbalances. By contrast, *Surjit Bhalla* saw India as "China with a 5- to 10-year lag." Other candidate giants – Brazil, Russia, Eastern Europe, and Africa as wholes – drew only occasional mention. Clearly, the concept of "emerging giant" has many dimensions, a few of which are discussed below and shown in the accompanying tables.

China and India are, respectively, the world's first and second largest countries by population size, second and seventh largest by land area, and fourth and eleventh largest by economic size measured at market exchange rates.[2] Together, they account for 7 percent of world GDP. Both economies, but China more than India, serve as drivers of the world economy: over the course of roughly ten years from 1995, China's annual real GDP growth averaged 9.1 percent, contributing 12.8 percent to world output growth over that time span. India's average for the same period was 6.1 percent, and its contribution, a relatively modest 3.2 percent. In 2005 alone, Chinese GDP grew by 10.0 percent, and India's, by 9.0 percent. Such rates are comparable to those of postwar Japan in the 1960s and South Korea in the 1980s. Although China's and India's growth rates are projected to decelerate, their contribution to world output growth is forecasted to expand over the next 15 years as both become increasingly prominent global players.

Despite their already impressive economic size, China and India still fall well below the world average in terms of GDP per capita. In 2005, China's per capita GDP was $1,449, while India's was $588 – roughly 25 percent and 10 percent, respectively, of the world average of $5,647 at market exchange rates. Using PPP exchange rates, which on the whole provide a better gauge of relative living standards than do the market-exchange-rate numbers, China's 2005 per capita income measured $6,012 – almost 70 percent of the world average; at $3,072, India's was just over 35 percent.

To a degree, these low per capita incomes reflect these countries' histories of rapid population growth. But fertility rates have come down in both countries, with the Chinese rate now at 2 births per woman (1960-2005 average: 3.6), and the Indian rate at 3 (average: 4.4). Population growth in both countries is currently stable at 1 percent a year. The World Bank estimates that China's population will peak in 2032 at 1.5 billion people. Owing to its higher fertility rate, India will surpass China as the most populous country before 2032 and will reach 1.8 billion people by 2050.

GDP in Six Selected Countries – Actual and World Bank Forcasts

Percent	Share of World GDP		Average Annual Real Growth Rate		Average Contribution to World Growth	
	2004	2020	1995-2004	2005-20	1995-2004	2005-20
China	4.7	7.9	9.1	6.6	12.8	15.8
India	1.7	2.4	6.1	5.5	3.2	4.1
United States	28.4	28.5	3.3	3.2	33.1	28.6
Japan	11.2	8.8	1.2	1.6	5.3	4.6
Germany	6.6	5.4	1.5	1.9	3.0	3.3
Brazil	1.5	1.5	2.4	3.6	1.5	1.7
World	100.0	100.0	3.0	3.2	100.0	100.0

Data source: World Bank.

With their populations stabilizing, rapid economic growth and capital deepening have allowed China's and India's still-low per capita incomes to rise rapidly in recent years. With per capita incomes up 58 percent in China and 30 percent in India between 1990 and 2000, these countries have become magnets for foreign direct investment intended to serve their growing middle classes as well as to expand their thriving export base. In 2005, China plus Hong Kong attracted 12 percent of direct investment flows – ranking second after the United Kingdom and ahead of fourth-place United States. Considering developing countries alone, Brazil, Russia, and India ranked third, fourth, and eleventh, respectively.

Selected Indicators of Economic Rank, 2005

2000 USD, unless stated otherwise	United States	EMU	Japan	China	India	World
Real GDP – trillions	11.1	6.6	5.0	1.9	0.6	36.4
Real GDP – rank	1	–	2	4	11	–
Real GDP – share of world	30.4%	18.3%	13.7%	5.2%	1.8%	–
Real GDP growth, yoy	3%	1%	3%	10%	9%	3%
GDP PPP – trillions	11.1	8.1	3.6	7.8	3.4	54.6
GDP PPP – rank	1	–	3	2	4	–
GDP per capita	37,267	21,148	39,075	1,449	588	5,647
GDP per capita – rank	4	–	3	93	121	–
GDP per capita PPP	37,267	25,944	27,817	6,012	3,072	8,477
GDP per capita PPP – rank	2	–	18	76	103	–
Population – millions	297	311	128	1,305	1,095	6,438
Population – rank	3	–	10	1	2	–
Population growth rate	1%	0%	0%	1%	1%	1%
Fertility rate	2	2	1	2	3	3
Land area – rank	3	–	61	2	7	–

Data sources: World Bank, OECD, and IMF. Purchasing Power Parity (PPP) data are 2000 international dollars.

Other important indicators of emerging giant status would have to include the supply of skilled and unskilled workers; the size of the domestic financial markets; share of world trade, world payments imbalances, and official foreign exchange reserves; and demand for natural resources, like oil and coal, and the resulting contribution to carbon emissions and global warming. Obviously, the list goes on and on, and many of these additional aspects were discussed during the conference.

Finally, as *Stephen Bosworth* noted, it may be well to consider how growing economic integration within East Asia or all of Asia – or among China, India, and Russia – is likely to have a multiplicative effect. Ideally, such integration will be politically stabilizing, but it will also clearly magnify the growing economic impact of these emerging giants.

[1] China refers to Mainland China.

[2] At Purchasing Power Parity (PPP) exchange rates (which equalize the price of a common basket of goods across countries and put more weight on the portion of the basket that is not traded internationally), China's economy ranked second and India's fourth in 2005.

This essay summarizes presentations and discussion at the 51st economic conference of the Federal Reserve Bank of Boston, "Global Imbalances – As Giants Evolve," which was held in June 2006. We thank all of the presenters, who are listed below, for their valuable contributions to the success of the conference. The essay includes additional material and also reflects developments through early 2007. Presenters' names are italicized in the essay.

Shankar Acharya
Member, Board of Governors
and Honorary Professor
Indian Council for Research
on International Economic Relations

Abhijit Banerjee
Ford Foundation International Professor of Economics
Massachusetts Institute of Technology

Suzanne Berger
Raphael Dorman and Helen Starbuck Professor
of Political Science
Massachusetts Institute of Technology

Surjit Bhalla
Principal
Oxus Investments

Ambassador Stephen W. Bosworth
Dean, The Fletcher School of Law and Diplomacy
Tufts University

Richard N. Cooper
Maurits C. Boas Professor of International Economics
Harvard University

Alan V. Deardorff
John W. Sweetland Professor of International Economics
Professor of Economics and Public Policy
University of Michigan

Guy Debelle
Head, International Department
Reserve Bank of Australia

J. Bradford DeLong
Professor of Economics
University of California at Berkeley

Richard B. Freeman
Herbert S. Ascherman Professor of Economics
Harvard University

Peter M. Garber
Global Strategist
Deutsche Bank

John Helliwell
Arthur A.E. Child Foundation Fellow
Canadian Institute for Advanced Research

The Honorable Donald L. Kohn
Vice Chairman
Board of Governors of the Federal Reserve System

Laurence J. Kotlikoff
Professor of Economics
Boston University

Lawrence J. Lau
Vice Chancellor
The Chinese University of Hong Kong

Catherine L. Mann
Senior Fellow, Institute for International Economics
Professor of Economics, Brandeis University

Christopher M. Meissner
University Lecturer
University of Cambridge

Eswar S. Prasad
Division Chief
Financial Studies Division
International Monetary Fund

Lawrence H. Summers
Charles W. Eliot University Professor
Harvard University

Alan M. Taylor
Professor and Director
Center for the Evolution of the Global Economy
University of California at Davis

Lixin Colin Xu
Senior Economist
The World Bank

The conference agenda and the presenters' papers and biographies can be found at www.bos.frb.org/economic/conf/conf51/index.htm

developments suddenly provided improved global access to previously untapped resources and the incentive to take advantage of them. The resulting flows of capital and people led to very persistent current account imbalances lasting through much of the period, offering some possible parallels to today's situation.

Beginning in the 19th century, improvements in shipping and communications technology and widespread adoption of the gold standard led to a surge in international migration, trade, and investment through the world's first truly global markets.[3] Steam replaced sail, the telegraph arrived in the 1830s, the first transoceanic cable was laid in 1866, and the Suez Canal opened in 1869. Driven by poverty, famine, religious persecution, and failed revolutions, the stream of people from the European core to sparsely populated North America, Australia, and New Zealand became a flood as 55 million people, one quarter of the European population in 1850, emigrated between 1815 and 1924;[4] 60 percent of the migrants landed in the United States. Capital followed them to the New World, while investment in densely populated Asia accelerated as well. Throughout this period, Britain, the banker – and venture capitalist – to the world, ran a current account surplus that peaked at 9 percent of GDP. Britain was able to run this current account surplus *despite* a persistent trade deficit because it enjoyed significant income from massive foreign assets distributed throughout the empire. By contrast, the "offshoot" countries

settled largely by European immigrants and their offspring ran persistent current account deficits. The United States recorded a current account deficit for most years between 1850 and 1890 as interest payments on its foreign debt more than offset a small trade surplus based on its shipping services. In other words, net flows of investment income played a key role in sustaining these long-term imbalances.

In Britain's case, its net investment earnings reflected both its large net asset position[5] and the gap between the interest it earned on those foreign assets and the interest it paid on its foreign liabilities. According to economic historians *Christopher Meissner* and *Alan Taylor (MT)*, this gap represented Britain's reward for risk taking and its talent for financial innovation, as well as its reputation as a safe investment haven with secure property rights, economic stability, and deep, liquid financial markets. That the sun never set on the British Empire must have helped. But over time Britain's "privilege" as a financial pioneer dwindled as investors in other countries gradually adopted more sophisticated financial instruments and the emerging markets of the day grew less risky.

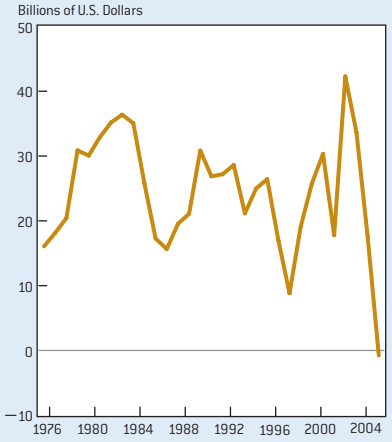
A century later, the United States is now the world's hegemon, a status that again reflects a talent and taste for financial innovation and risk taking as well as its economic strength and financial and political stability. As a result, like 19th century Britain, the United States has been earning more on its foreign assets than it pays on its foreign liabilities – by an amount that averaged 0.5 percent of GDP from 1981 to 2003, as estimated by *MT*. Along with increased leverage, this "privilege" allowed the United States to earn positive investment income on an annual basis through 2005 even as it recorded a growing net debt position for over 20 years (Figure 3). In other words, until very recently this country's net investment earnings helped slow the growth in the U.S. current account deficit.

But as happened in pre-World War I Britain, the U.S. "privilege" has declined over time from 3 percent in the 1960s to 1 percent today, according to *MT*, as other countries have adopted U.S. financial practices. As a result of this decline and the growing U.S. net liability position, in 2006 annual investment income finally turned negative and started to add to the U.S. current account deficit.[6] Thanks to the magic of compound interest, this small change, if continued, could significantly aggravate the stability issue, making the difference between a manageable payments deficit and an imbalance requiring a more painful adjustment.[7]

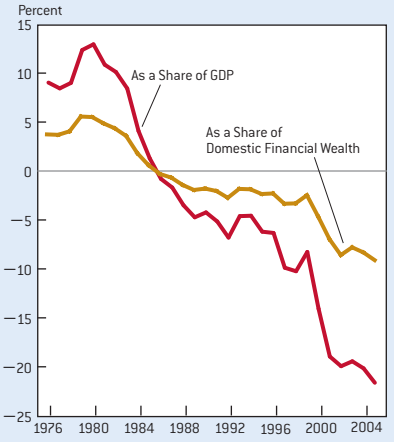
…like 19th century Britain, the United States has been earning more on its foreign assets than it pays on its foreign liabilities…

Figure 3

U.S Net Investment Income
1976 to 2006



Net U.S International Investment Position* as a Share of GDP and as a Share of Domestic Financial Wealth
1976 to 2005



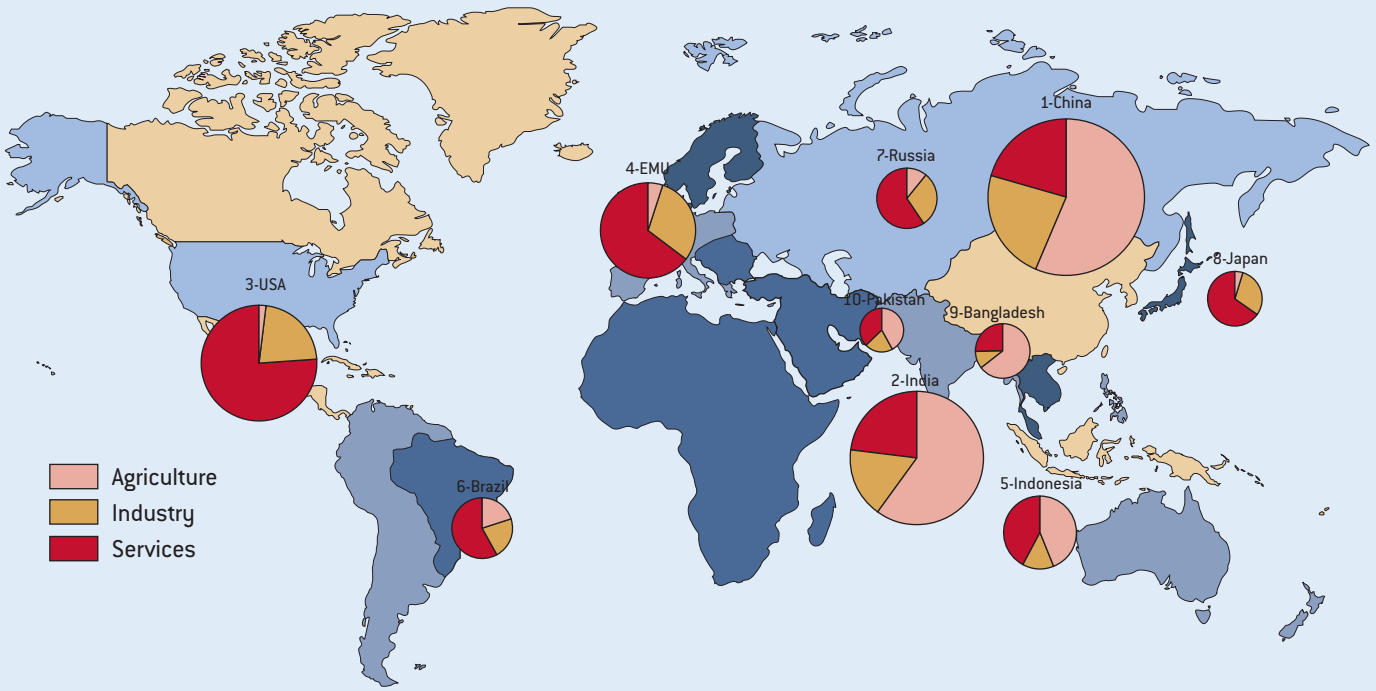
* Net international direct investment position is calculated at current cost.
Source: Bureau of Economic Analysis.

While some argue that China is hardly a "new" player, the country was largely closed to foreign investment from 1949 to the late 1980s.

In this regard, however, the lessons from the First Globalization appear remarkably optimistic since, during that period, payments adjustment was surprisingly smooth. Indeed, *MT* find that adjustment generally occurred without the severe GDP slowdowns typical of many post-World War II corrections. For the "offshoots" and other borrowers that could credibly adhere to the gold standard, the reversal of payments imbalances did not generally involve a banking or currency crisis. Further, the countries that adopted the unforgiving gold standard as proof of good behavior did not suffer greater output losses during an adjustment than did the countries with flexible exchange rates, possibly because labor markets were also more flexible (and wages free to fall) in the early 20th century. Overall, *MT* argue that the capital-poor countries in the First Globalization were able to run sustained deficits with smooth reversals as long as they invested the borrowed capital in productive ways that facilitated export growth and debt repayment. Today, *MT* suggest, the United States' ability to avoid the hard landing and large dollar depreciation predicted by many analysts depends on our ability to maintain market confidence in this country's economic fundamentals.

Others are less sanguine, however. *Suzanne Berger* questions whether foreign capital has in fact been used to build U.S. productive capacity, while *John Helliwell* warns that, in an era of multiple financial centers, the only way the United States can remain a magnet for foreign capital is to continue producing a steady stream of financial and other innovations and unusually high returns. If and when the "luster" disappears, disappointed investors are likely to flee – as in Asia in 1997-98.

Figure 4 Countries with World's Largest Labor Forces, by Sector, 2002



* The area of each pie is proportional to the size of the labor force of the selected region/country. Bangladesh's sectoral distribution data are for 2000; India's are for 2005.
Source: International Labour Organization cited by the World Bank World Development Indicators, U.S. Department of State, Key Labor Indicators.

Labor Market Imbalances

As in the First Globalization, today's stubborn imbalances appear to be rooted (at least in part) in massive shifts in the size and location of the globally accessible labor supply. Indeed, the recent doubling of the globally active labor force may be one of the defining developments of our era. As *Richard Freeman* points out, until the end of the Cold War, China, India, and the ex-Soviet bloc were cut off from the world by trade barriers, capital controls, and restrictions on emigration. But with the collapse of the Soviet Union, China's turn toward market economics, and India's shift away from autarky, the supply of labor "available" to global producers roughly doubled from 1.5 billion to 3 billion people – though a sizable part of this "new" supply remains in unproductive jobs in rural areas and state-owned enterprises (Figure 4). While some argue that China is hardly a "new" player, the country was largely closed to foreign investment from 1949 to the late 1980s. China first welcomed foreign investors in 1982, but the 1989 Tiananmen tragedy scared them off. Almost a decade later, Y2K investments greatly improved Asia's global communications links, and China finally joined the World Trade Organization, earning its "seal of approval," in 2001.

But the arrival of this additional labor supply did not increase the world's capital stock proportionately. Indeed, *Freeman* calculates that with the doubling of the world labor force, the capital-labor ratio fell to 61 percent of what it would have been had China, India, and the ex-Soviet bloc remained isolated. Naturally, "newly arrived" workers have benefited from the opportunity to work with capital and technology from the advanced countries. But comparably skilled workers in advanced countries find themselves in a weakened bargaining position vis-à-vis owners of capital everywhere and could face capital "shallowing" as well.

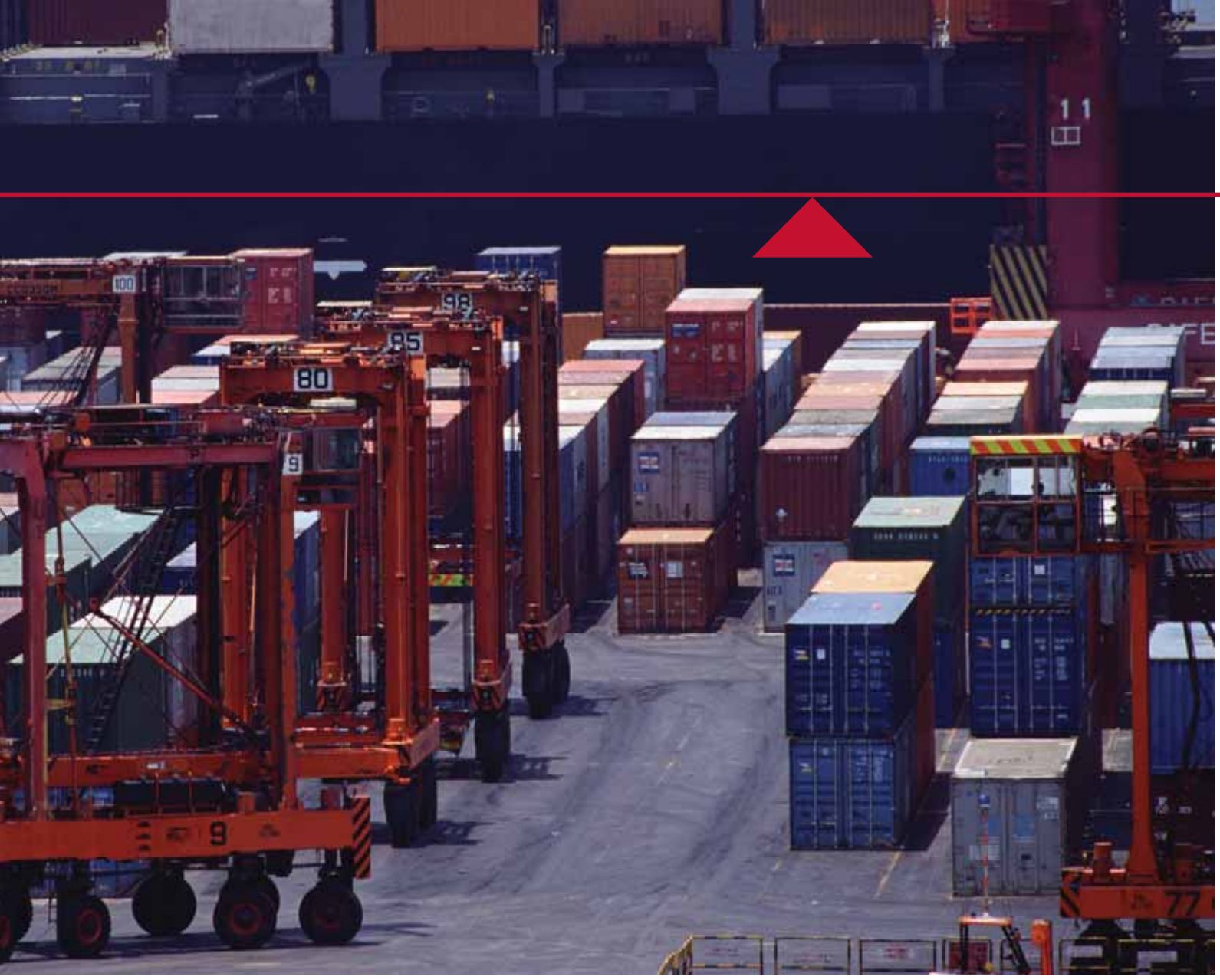
From the perspective of the American worker, China's daunting competitive threat reflects its remarkably low wages. According to the Bureau of Labor Statistics, average hourly compensation in China's manufacturing sector was just 67 cents in 2004. But what producers really care about is relative labor costs adjusted for

China in particular [has] been investing a surprising amount in education and R&D in order to "leapfrog" . . . to higher levels of human capital and technical sophistication . . . .

differences in productivity. And the gap between American and Asian labor costs per unit of output is much smaller than the gap between American and Asian wages. After adjusting for productivity differences, China is probably no more competitive overall than is high-income Hong Kong or Singapore – although the more productive foreign ventures in China's coastal provinces may have a significant competitive advantage. Still, history suggests that this gap between domestic and foreign unit labor costs tends to narrow over time as foreign productivity rises faster than productivity in the United States, but foreign wages rise even faster.

While economists used to argue that American workers would always do well if only they would invest in human capital and move up the technology ladder to "better" jobs ahead of the foreign competition, China and India have not been following the economists' script. Rather they – and China in particular – have been investing a surprising amount in education and R&D in order to "leapfrog" (*Freeman's* phrase) to higher levels of human capital and technical sophistication ahead of schedule. As a result, Dani Rodrik finds that China's export bundle is far more sophisticated than one would expect given its low per capita income.[8] He attributes this success to China's industrial policy and its emphasis on technology transfer.

These Asian investments in human capital have produced some sobering statistics. While the United States accounted for 30 percent of world enrollment in higher education in the 1970s, as *Freeman* points out, this share had fallen to 14 percent by 2000. Similarly, in the 1970s, the United States produced 50 percent of the world's Ph.D.s, but it is expected to grant just 15 percent of the world's doctorates in 2010, when China alone will grant more Ph.D.s in science

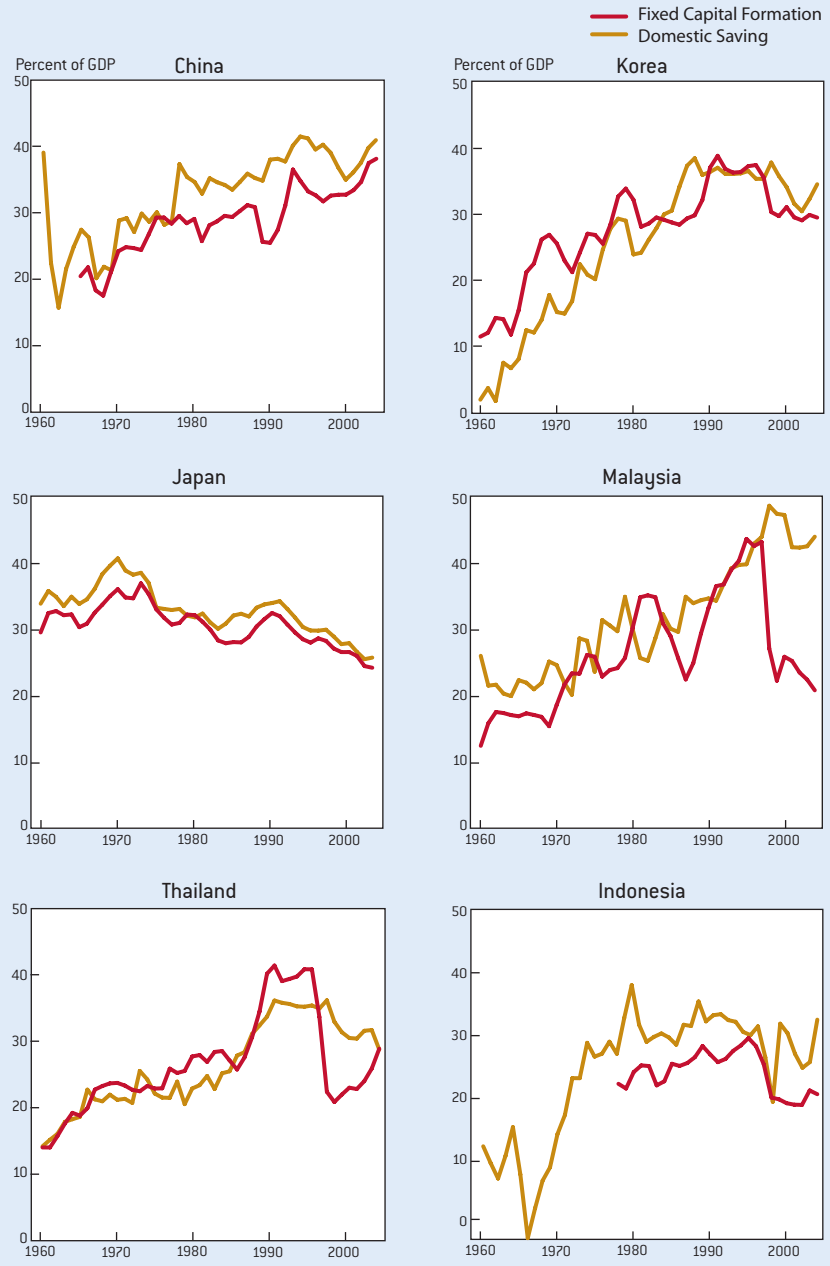


and engineering than the United States.[9] These developments are a matter of concern primarily because maintaining a leading role in high-tech sectors appears to require having a comparative advantage in scientists and engineers as well. Further, *Freeman* notes, innovation seems to depend on scale – on having a critical mass of researchers – rather than on achieving a given proportion of researchers in the workforce. While the United States is most unlikely to lose its critical mass or comparative advantage in high-tech industries any time soon, it could face growing challenges to its leadership role, at least in some sectors.

But beyond this competitive issue, as *Freeman* and *Bhalla* point out, we should rejoice that by bringing modern technology to all, globalization offers the prospect of "making poverty history." According to Judith Banister,[10] the real wages of urban manufacturing workers in China more than doubled between 1990 and 2002, while in India[11] real wages rose at a robust 4 percent a year in the second half of the 1990s. As a result, rapid development has already lifted at least 450 million people out of $1-per-day poverty in China and India in the past 25 years.[12] But these declines in global income inequality have accompanied a highly visible increase in income inequality *within* China; these growing gaps are feeding social tensions, particularly in impoverished rural regions, as the Chinese government is acutely aware.

In the end, China and India will likely follow the path of developing countries before them. Wages and incomes will rise to rough parity with world levels. But the transition will take time. In South

Figure 5 Fixed Capital Formation and Saving in Selected Asian Economies
as a Percent of GDP, 1960 to 2005



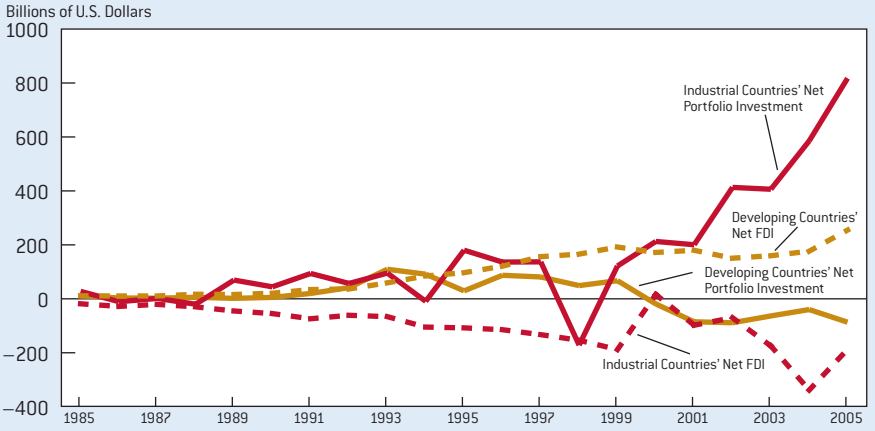
Source: World Bank, World Development Indicators.

Korea, it lasted about 50 years, but the enormous scale of China's adjustment is even more daunting. Almost 200 million underemployed Chinese workers with huge incentives to move to better paid jobs in coastal urban areas remain in the countryside. Some 150 million have already moved, and more are following at the rate of more than 5 million a year by OECD estimates.[13] But because the Chinese government is concerned about urban overcrowding and unrest, it is using a variety of schemes like the Hukou system[14] to manage a migration that dwarfs the great European population movements of the 19th century. Still, if China's urban manufacturing wages continue to double every decade, Chinese wages will approach advanced country levels in about 30 years, according to *Freeman's* calculations. He estimates that it may take India 40 to 50 years to reach the same level. Other observers, including *Alan Deardorff* and *Lawrence Lau*, suggest that convergence may take even longer, given the remarkable degree of home bias in consumption and the size of China's labor surplus.[15]

Of course, if Chinese wages are likely to rise somewhat slowly, renminbi (RMB)

appreciation offers an alternative way to narrow the gap between U.S. or E.U. and Chinese labor costs. But the Chinese government remains very cautious about allowing that process to occur. At this writing, in late April 2007, the RMB has risen about 7 percent since China ended its dollar peg in July 2005. This gradual rise reflects Chinese concern that rapid RMB appreciation might harm China's uncompetitive agricultural sector and stir political unrest in the countryside. It might also undermine the inefficient state-owned enterprises and the major banks whose assets are heavily weighted with loans to that sector.

Figure 6 Net Foreign Direct Investment and Net Portfolio Flows: Industrial and Developing Countries
1985 to 2005



Source: International Monetary Fund, *Balance of Payments Statistics Yearbook*, Part 2&3, 1992-2006.

The Essential Complements to Capital

The global distribution of labor and energy resources helps to explain the prevailing pattern of current account deficits and surpluses. But what explains the current pattern of capital flows? In particular, why are poor surplus countries willing to invest so much of their savings in the United States, a mature, wealthy country? Many analysts have found these "wrong way" flows to be a particular cause for concern.

Capital is a requirement for growth; it embodies technology. But to make effective use of capital-cum-technology, as *Brad DeLong* reminds us, countries also need institutions like property rights, the rule of law, good management, and good governance. Unfortunately, these complements to capital tend to be in relatively short supply in many developing countries.[16] So, while economic theory suggests that capital ought to flow toward capital-poor countries, where the returns to investment should be high, in reality most developing countries are forced to raise most of their investment capital domestically.

In the First Globalization, capital did flow from Britain to the "offshoots" and to the periphery as well, but, for the most part, these areas were under British rule. Indeed, the British East India Company literally governed India from the mid 1700s to the mid 1800s. And the offshoot countries were led by people who

. . . to make effective use of capital-cum-technology, . . . countries also need institutions like property rights, the rule of law, good management, and good governance.

had brought British and other European institutions with them. Even so, in the 19th century the U.S. current account deficit generally amounted to about 0.5 to 1.0 percent of U.S. GDP, while investment spending equaled 20 percent of GDP. For the most part, in other words, foreign capital covered only a small portion of the required investment funds.

Today, by contrast, some analysts see net capital flows from China to the United States as a sign of a puzzling savings "glut." But China's situation is actually not unique. Japan has run surpluses for years, with savings outstripping investment even in much of the 1950s. And Malaysia and Indonesia have followed the Japanese path much of the time (Figure 5). Perhaps world capital markets are just a lot less integrated than economists like to think. Indeed, data on *net* capital flows suggest that global capital markets may be less integrated now than they were in the years before World War I – not in scale perhaps, but in scope. Today, much capital flows among the rich nations, for diversification purposes, rather than from rich to poor as was the norm in the 19th century.

But maybe this outcome should only be expected. After all, according to *Abhijit Banerjee* and *Colin Xu*, in countries like China and India, even *internal* capital movements are highly constrained. In this regard, they cite the high cost of monitoring assets and collecting payment from small borrowers and the role of various institutions like the Hukou system and regional protectionism.[17] As a result of these impediments, interest rate spreads between deposit and loan rates or between loans to different borrowers can be enormous, even within a small geographic area,[18] and the marginal product of capital differs widely across regions and within narrow industries in both countries.

Yet, despite these many obstacles, and unlike portfolio capital, foreign direct investment (FDI) does flow to the developing countries on a net basis (Figure 6). And it carries technology, managerial skills, and growth-promoting institutions with it. In addition to serving as a conduit for the complements to capital, FDI is also far more stable than portfolio flows, which are subject to sudden stops and reversals. Thus, as *Brad DeLong* emphasized, we should fervently hope – and governments should work to ensure – that gross and net FDI flows to the developing countries prove "adequate" to the task of providing these crucially important externalities.

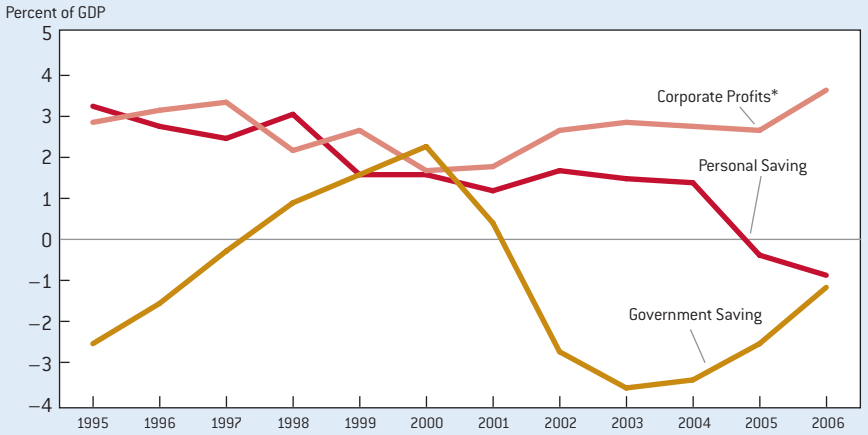
Explaining the Imbalance in Global Savings

The United States is clearly well endowed with the complements to capital.


. . . unlike portfolio capital, foreign direct investment (FDI) does flow to the developing countries on a net basis . . . . And it carries technology, managerial skills and growth-promoting institutions . . . .

Figure 7 Net Saving by U.S. Public and Private Sectors

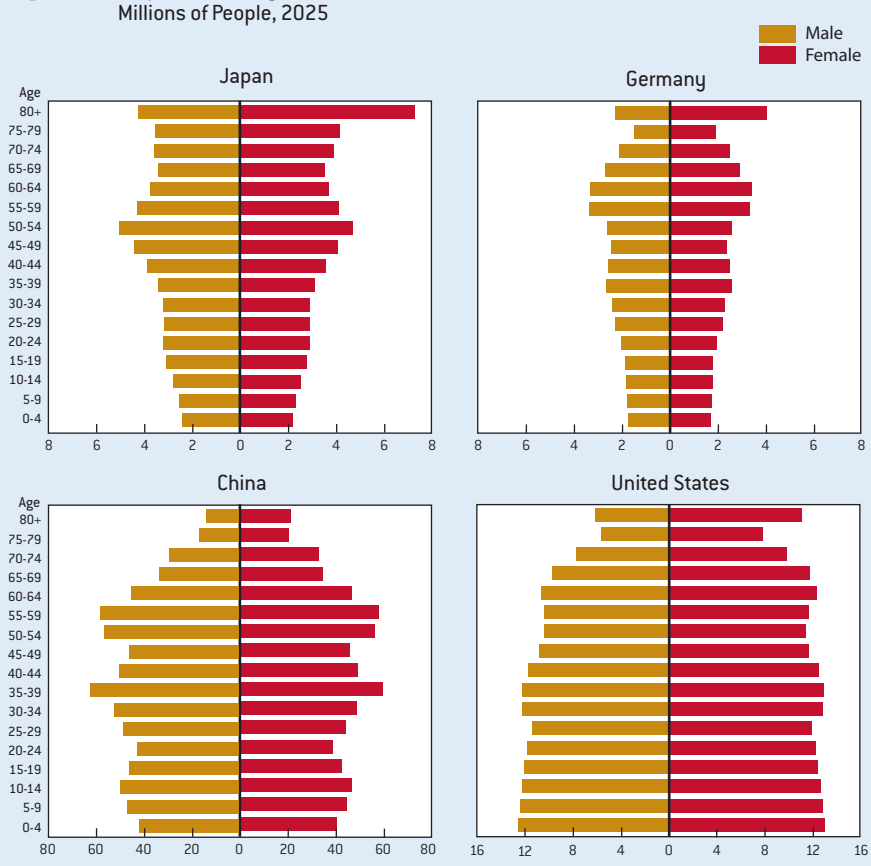
as a Percent of GDP, 1995 to 2006



* Corporate profits includes inventory valuation and capital consumption adjustments.
Source: Bureau of Economic Analysis, Office of Management and Budget.

Figure 8 Population Pyramids

Millions of People, 2025



Source: U.S. Census Bureau.

Why then does the United States, the "world's consumer of last resort," save so little? And why do the major surplus countries – currently Japan, China, Germany, and some of the oil exporters – save so much? In 2004, U.S. gross national saving amounted to just 13 percent of GDP, the lowest ratio in the OECD, while Japan was saving twice and Korea almost three times as much. In the context of the global imbalances, however, what really counts is the match/gap between domestic saving and domestic investment.

According to the U.S. national income accounts, since 1995 the U.S. current account has deteriorated by 5 percentage points of GDP. For the period as a whole, this development matched an increase in the gap between gross investment and private saving amounting to almost 4 percent of GDP plus a small decline in government saving. But these numbers mask big swings in the government fiscal balance, which improved markedly in the late 1990s and then fell by almost 5 percent of GDP from 2000 to 2005. Within the private sector, net corporate saving has risen slightly, while household saving has fallen below zero (Figure 7).

Yet *Richard Cooper* argues that when properly measured, U.S. households actually "save" a lot. Because "saving" is defined as consumption deferred today to raise consumption tomorrow, *Cooper* argues that it should actually include investment in education and durable goods as well as capital gains on wealth (which, thanks to ongoing financial innovations like mortgage equity withdrawals, have become ever more

liquid). Adding in public and private pension claims,[19] American households have a good many sources of future income, he suggests – although, admittedly, the uneven distribution of these resources may be cause for concern. But overall, *Cooper* contends, it is not clear that the *average* household needs to save more – or that it is likely to do so.

Similarly, corporate and government saving/investment are also poorly measured. Corporate R&D, training, and branding are recorded as intermediate business expenses, while government spending on R&D and education are included in consumption, not investment. If U.S. spending on durable goods, education, and R&D were considered saving, then U.S. "saving" would equal over 33 percent of GDP – hardly a sign that the United States is "shortchanging the future," in *Cooper's* view. Making a similar measurement adjustment for other countries boosts their saving rates as well, but generally by less than for the United States.[20] Still, while it is useful to recognize that part of today's "consumption" spending is actually "investment," it is *spending* none the less. Extra saving matched by extra investment does nothing to improve the imbalance between saving and investment reflected in today's current account deficit.

Turning to why the major surplus countries save so much (relative to domestic investment) and invest a great deal in the United States, *Cooper* and others[21] point out that U.S. assets are attractive because the economy remains robust and innovative and because U.S. financial markets offer liquidity, security, and stability. In the major surplus countries, by contrast, investment opportunities are limited relative to the available savings – primarily because of demographic trends. Indeed, *Cooper* suggests, the demographics are key. Low population growth countries, like Japan and Germany, with declining numbers of young adults, have limited need for investment in housing, education, and capital equipment (Figure 8). Moreover, as a result of its one-child policy, China will soon be a low population growth country as well, even though as a developing country, it also faces huge housing and infrastructure needs. In China, thus, investment is extraordinarily high – near 40 percent of GDP – but saving is even higher because of China's inadequate social safety net and underdeveloped capital markets. The United States is an exception among the advanced economies as its fertility rate has remained relatively high, thanks to ongoing immigration on a significant scale.

Why are Japan and Germany not investing their surplus savings in the capital-poor developing countries as economic theory would suggest? The theory as just stated is too simple, *Cooper*

. . . U.S. assets are attractive because the economy remains robust and innovative and because U.S. financial markets offer liquidity, security, and stability.

replies, because risk-averse investors seek a host of legal, political, and financial institutions like the rule of law and secure property rights. Most low- and many middle-income countries do not offer these conditions as the previous section discussed and the recent rise of "resource nationalism" in the oil exporters confirms.[22] By contrast, the United States does offer the required institutions – plus a higher return on investment than most other rich countries.

The demand for U.S. financial assets also reflects the fact that many, perhaps even most, countries are not "comfortable" with freely floating exchange rates, as *Cooper, Garber,*[23] and *Summers* all concur; thus, many governments choose to accumulate foreign exchange reserves and invest them in U.S. Treasury securities at a modest return. In *Cooper's* view, these central banks are acting as financial intermediaries investing abroad on behalf of very conservative private savers (in Japan via the postal savings system) or on behalf of savers still facing capital controls (as in China). And even for developing China, the yield on U.S. government securities may not look so unattractive, given the country's current limited capacity to absorb capital. As symptoms of these limits, *Larry Lau* notes that the Chinese banking system continues to steer funds to unproductive projects, while the government keeps struggling to cool "overheated" investment spending.

Overall, in *Cooper's* judgment, a large U.S. current account deficit is sustainable; indeed it may even be desirable. While the U.S. current account deficit clearly

cannot continue to rise relative to GDP, it can certainly remain near its present relatively high ratio to GDP. Demographic trends in Japan, Europe, and parts of developing Asia will encourage those regions to accumulate external assets to draw down as the population ages. In contrast, the United States has notably different demographics. Although rich and politically mature, it remains in a sense a "young" and "developing" country. The United States is also particularly good at inventing ways to exchange low-risk claims for high-risk assets. No wonder world savers want to invest a portion of their savings in the United States, *Cooper* concludes.

But not everyone agrees. Foremost among those with a less sanguine interpretation of recent trends in the U.S. saving-investment imbalance is *Larry Kotlikoff*. Admitting to little concern about the U.S. current account deficit[24] per se, he focuses instead on the disturbing decline in U.S. *net* investment and even faster decline in U.S. *net* saving relative to GDP.[25] Noting that government consumption has not been unusually high in recent years, *Kotlikoff* blames the fall in U.S. savings on increased private consumption, which now accounts for over 70 percent of GDP, its highest share since World War II. In particular, he points to an increase in consumption by the elderly, which he attributes to a fiscal policy that has been transferring money from the young to the old via Social Security, Medicare, and Medicaid benefits for decades. Citing Smetters and Gokhale, *Kotlikoff* emphasizes that with the aging of the Baby Boom generation, the present value of the fiscal gap – projected government receipts minus projected government expenditures – amounts to $63 trillion.[26] At some point, *Kotlikoff* warns, the U.S. government's looming fiscal gap will spook the financial markets; investors will unload U.S. government securities and dollars, U.S. interest rates and inflation will rise, and a disorderly correction will be underway.

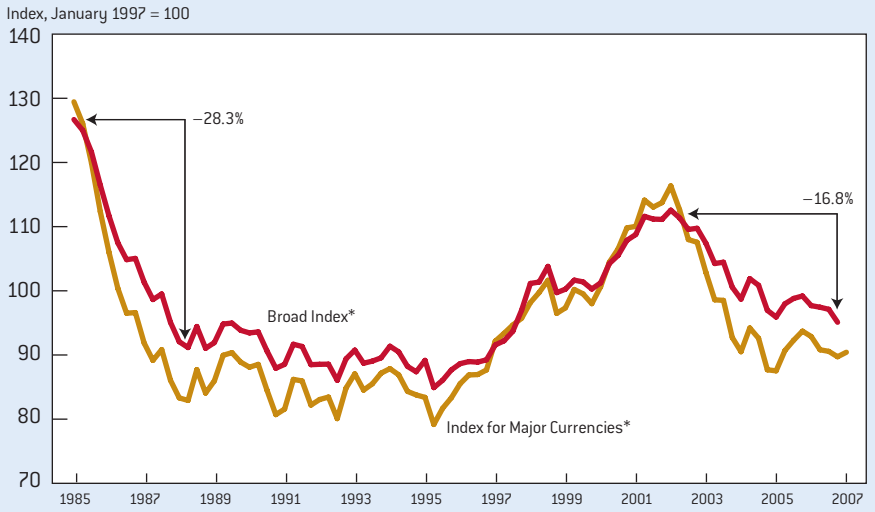
But as several conference participants observed, most other advanced countries face equally difficult fiscal futures, for which – small comfort – they are no better prepared than is the United States. In addition, some attendees suggested that investors already assume that the U.S. government will find ways to modify – or renege on – its commitments to the elderly. More basically, as *Guy Debelle* reminded the group, current account deficits and fiscal deficits are distant cousins, not twins. Curing a fiscal deficit need not cure a current account deficit, or vice versa. In this regard, *Cooper* emphasized that while he is not worried about today's U.S. current account deficit, he strongly agrees with *Kotlikoff* that this country has a very serious fiscal problem related to Medicare – now that Americans have decided that death is "becoming an option."

(How) Will Adjustment Occur? A Continuum of Views

Will adjustment of the current global imbalances occur soon and abruptly or over a more extended period? And will the costs of this reversal be modest and concentrated in the United States, or will

. . . current account deficits and fiscal deficits are distant cousins, not twins. Curing a fiscal deficit need not cure a current account deficit, or vice versa.

Figure 9 Real Trade-Weighted Exchange Value of the U.S. Dollar
First Quarter 1985 to First Quarter 2007



* Countries whose currencies are included in the Index for Major Currencies are Euro Area, Japan, United Kingdom, Switzerland, Australia, and Sweden. Broad Index has 19 additional currencies.
Source: Federal Reserve Board.

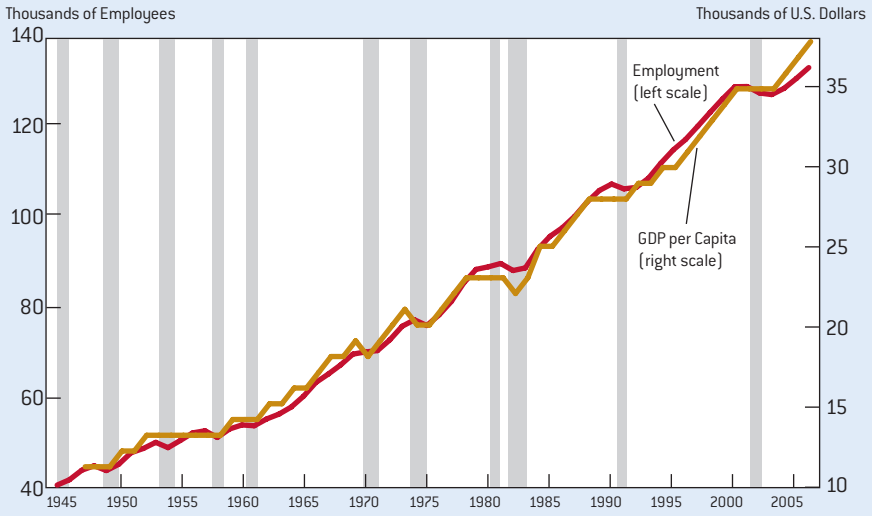
…as the persistence of the global imbalances attests, many players appear to be quite satisfied with the current situation….

they result in a global slowdown? Opinions range along a continuum extending – at the conference, at least – from *Cooper's* confident optimism to *Kotlikoff's* heightened anxiety.

Per force, adjustment – whenever it occurs – will require that U.S. output grow faster than U.S. demand. There is no other way. Narrowing the current gap between U.S. gross domestic demand and output can occur only through some combination of slower U.S. demand growth, faster foreign demand growth, and dollar depreciation to encourage U.S. production and foreign consumption. Thus, foreign officials should stop suggesting that more U.S. saving, particularly by the government, is all that is needed. As *Larry Summers* noted, more U.S. saving without offsetting foreign stimulus would likely result in an unpalatable slowdown in world growth.

But as the persistence of the global imbalances attests, many players appear to be quite satisfied with the current situation – at least for now. In addition to *Cooper* and *Debelle, Dooley, Folkerts-Landau* and *Garber (DFG)* are prominent among the analysts arguing this case. In the *DFG* view, developing countries seek to borrow capital, particularly FDI capital, at least on a gross basis. But to attract gross inflows in this post-colonial era, emerging countries need to accumulate net dollar collateral, which they post in the form of foreign exchange reserves. In addition, and importantly, China and much of Asia are convinced that they need export-led growth to absorb their supplies of underemployed labor. Indeed, China/Asia's vast underemployment and savings are the central driving forces in the Bretton Woods II system[27] – as signaled by world interest rates that have been unusually low, not high. U.S. savings may have fallen, in other words, but the increased

Figure 10 U.S. Total Nonfarm Employment and Real GDP per Capita
1945 to 2006



Source: Bureau of Economic Analysis, Bureau of Labor Statistics, Census Bureau.

supply of foreign savings is the dominant development.

In the advanced countries, moreover, almost everyone is pleased to enjoy real long-term interest rates and core inflation that are somewhat lower – and wealth that is somewhat higher – than would otherwise prevail. In addition, producers who can access Asia's low-cost labor have been co-opted. They no longer clamor for protection and have largely abandoned labor to fight globalization on its own. For political and economic reasons, thus, the Bretton Woods II arrangement has already proved itself to be very stable.

In the *DFG* view, eventual adjustment, when it comes, is likely to involve a slow rise in real interest rates as China becomes more fully integrated into world capital markets; and most of the adjustment in the U.S. trade account will occur as U.S. demand adjusts to these higher real interest rates. The dollar will depreciate against the RMB but only gradually and moderately.[28] Reserve diversification by foreign officials would have little or no lasting effect on dollar-euro exchange rates because dollar-euro assets are close substitutes.

While *Cathy Mann* tends to agree with *DFG* regarding the likely stability of the current imbalances, she questions the desirability of that outcome. She builds her analysis around four Cs: consumption, co-dependency, complacency, and, possibly, crisis. Since the mid 1990s U.S. consumption has increased a good deal as a share of GDP, reinforcing the co-dependent relationship between the United States and its creditors. This co-dependency is based on unhealthy habits – an overemphasis on consumption (in the United States) and production (in China/Asia) – that could last a long time. In China, these habits lead to a misallocation of still-scarce resources; in the United States, to a

…producers who can access Asia's low-cost labor have been co-opted. They no longer clamor for protection and have largely abandoned labor to fight globalization on its own.

dangerous buildup of foreign-owned debt and a risky reliance on a narrowing set of foreign official investors who could tire of accumulating dollar assets at any time. *Mann* warns against complacency – on the part of the private investors and policy makers as well.

In *Mann's* opinion, adjustment requires both slower U.S. growth (brought about by Fed policy, not the integration of Asia into world capital markets) and significant dollar depreciation. Airing a somewhat similar scenario, William Dudley[29] suggested that U.S. household equity and real estate wealth is unlikely to continue growing at the unusually rapid rate of recent years. Thus, household saving will rise, and U.S. demand growth will weaken. As a result, U.S. interest rates will fall, triggering a depreciation of the dollar and, thus, a decline in the U.S. standard of living.[30] Hardly a disaster scenario, Dudley noted, but a plausible unwinding of the current situation.

In the end, *Mann*, joined by *Larry Summers* and indeed a growing minority as the conference progressed, was less certain than the *DFG* group and *Richard Cooper* that adjustment will occur without a crisis – especially since private investors show occasional signs of waking from their complacency. But "crisis" is defined in the mind of the beholder, *Mann* suggests. How benign were the sharp (roughly 30 percent[31]) dollar depreciation of 1985-87 and the ensuing balance of payments adjustments (Figure 9)? Was that a crisis? For the United States, it clearly was not. From Japan's perspective, however, the answer might be yes, since Japan's effort to curb yen appreciation at that time clearly laid the basis for its bubble economy in the late 1980s and the dismal period that followed. While the IMF's *Eswar Prasad* was less ready than *Mann* and *Kotlikoff* to forecast a crisis, as a preventative measure, he urged policy makers to focus on what countries need most for their own internal balance. China, for instance, needs exchange rate flexibility to develop its domestic financial markets and use its capital more effectively, he suggested.

. . . the current highly uneven distribution of world resources strongly suggests that today's payments imbalances could prove remarkably long lasting.

What's to Be Done in Uncertain Times?

What are the policy implications of today's large global payments imbalances? And how pressing is this question, now that the U.S. current account appears to be stabilizing? The improvement reflects the recent slowdown in U.S. relative to foreign growth and a 16-percent decline in the real trade-weighted dollar from its early 2002 peak. Looking ahead, forecasts for the U.S. current account over the next two years are mixed; many expect ongoing improvement, while others see a return to larger deficits relative to GDP.

But whatever the immediate outlook, the current highly uneven distribution of world resources strongly suggests that today's payments imbalances could prove remarkably long lasting. It will likely take at least three decades for Chinese wages to reach world levels – somewhat less

for Eastern Europe, somewhat more for India. Demographic trends are unlikely to reverse, even with (plausible) changes in immigration policies. And it seems improbable that the emerging giants will offer all of the institutional features of mature financial centers any time soon. In the meantime, even a shrinking U.S. payments gap of 5 or 4 percent of GDP remains substantial and would leave the world vulnerable to a sudden bout of disorderly dollar depreciation.

What then should policy makers do to facilitate smooth – if gradual – adjustment? Particularly if this rebalancing act is likely to be stretched out, a primary concern for all must be maintaining the credibility of the monetary and fiscal authorities on both sides of the surplus/deficit divide. For the developing countries, in particular, the main message, loud and clear, is the importance of developing the good legal and social institutions that comprise the essential "complements to capital" found in the world's financial centers. This theme, repeated throughout the conference, was echoed finally by *Larry Summers*, who insisted that it is profoundly important that we find ways to get capital to flow in the "right" direction. Embracing FDI, which serves as a conduit for the complements to capital, was one specific policy prescription. Increased investment in human capital – health and education, especially in rural areas – was another.

Further, although a fixed exchange rate may well hinder the development of a domestic money market in developing countries and clearly interferes with the

For the developing countries, …the main message, loud and clear, is the importance of developing…good legal and social institutions….

. . .monetary policy makers should be catholic in choosing the set of variables they weigh in setting policy. . . .this is no time for the Fed to don a straitjacket by adopting an inflation target.

conduct of an independent monetary policy, many of today's emerging giants continue to embrace this exchange-rate regime for reasons ranging from a dependence on export-led employment growth to fears about reversible capital flows. Thus, as *Summers* put it, the "least expensive lunch" for these central banks may be figuring out how to invest their foreign exchange reserves more profitably.[32] In this regard, China's new initiatives regarding reserve management are an interesting and promising sign.

As for the United States, because monetary policy is a blunt instrument, most conference participants agreed that it would be "nonsense" for the Fed to engineer an outright recession to achieve, at most, a modest decrease in the U.S. current account deficit. Rather, as Governor *Donald Kohn* emphasized, the Fed makes its key contribution to orderly adjustment by maintaining investor confidence in its ability to deliver low, stable inflation. However, a few participants did note that an extended period of low U.S. interest rates undoubtedly contributed to the rise in equity and residential real estate prices in recent years and, thus, through the wealth effect, to strong(er) consumption and investment. Accordingly, *Summers* suggested that monetary policy makers should be catholic in choosing the set of variables they weigh in setting policy, including asset prices and exchange rates in particular.[33] For this reason, he argued, this is no time for the Fed to don a straitjacket by adopting an inflation target.

Unlike monetary policy, fiscal policy is actually well-suited to affecting saving behavior – public saving, obviously, but private saving as well. For instance, policy makers might want to rethink the extent to which we subsidize housing in this country. Maybe subsidizing one dwelling per household would be enough? After all, to facilitate repayment of this country's growing foreign debt, Congress might want to favor productive investment – in science education, say – rather than less productive investment in housing. Even more compelling is the need to deal with the very large fiscal deficits scheduled to arrive over the next 25 to 30 years with the aging and retirement of the Baby Boom generation, absent strong and prompt Congressional action.[34] Today, foreign investors are ignoring this country's irresponsible fiscal stance. Tomorrow, they just might notice.

How workers in advanced countries fare will depend on the balance between the declines in real prices and in real compensation associated with the emergence of the New Giants. Ideally, the global spread of innovative effort and new technologies will increase productivity, lower costs, and raise living standards everywhere. Thus, policy makers should aim to keep rising protectionism at bay by favoring labor over capital (which will be able to take care of itself). Examples of such policies include decoupling health insurance coverage from employment in the United States and encouraging

improved labor standards in the developing countries.[35] Further, maintaining our competitiveness in coming decades will require the United States to invest more in education – in particular, in an education that gets students "hooked" on science and provides a less U.S.-centric view of the world. In particular, Ambassador *Stephen Bosworth* and *Larry Summers* both stressed the need for U.S. students to gain a better understanding of Asian developments and perspectives.

In the end, U.S. policy makers must focus on what they can control, fixing what they can, accepting what they can't, and having the wisdom to know the difference.[36] China – practical and cautious – faces huge domestic challenges and is not likely to be much moved or hurried by U.S. Congressional or Administration pressures. India's challenges are equally daunting. In addressing what they can, U.S. policy makers might well start with what needs to be done for the domestic economy, balancing the needs of current and future generations. As for what they can't control, U.S. policy makers may want to recall that despite – or was it, in part, because of? – the re-emergence of post-war Europe and the arrival of Japan and Korea as major economies thereafter, U.S. employment and living standards have continued to rise, with brief pauses, relentlessly higher (Figure 10). Thus, it seems safe to expect that, despite the transitional challenges, as Chinese and Indian incomes reach world levels over the next 50 years, the impact on global living standards will on balance be positive, far-reaching, and enormous.

Endnotes

[1] The current account balance comprises the balance of trade on goods, services, and income plus unilateral transfers.

[2] As foreigners' U.S. assets rise, so too do U.S. interest payments on those assets; thus, stabilizing the current account -- which includes interest payments -- relative to output requires that the current account deficit grow no faster than nominal GDP. In these days of relatively low inflation, achieving nominal U.S. GDP growth of over 6 percent is no longer a sure bet.

[3] Maurice Obstfeld and *Alan M. Taylor,* "Globalization and Capital Markets," in *Globalization in Historical Perspective*, Michael D. Bordo, *Alan M. Taylor,* and Jeffrey G. Williamson, Chicago: University of Chicago Press, 2003.

[4] Robert Barde, Susan B. Carter, and Richard Sutch, "International Migration," *Historical Statistics of the United States*, vol. 1, Population, New York: Cambridge University Press, 2006.

[5] British net foreign assets reached 200 percent of U.K. GDP in 1913.

[6] After four quarters of negative earnings, the United States had positive net income earnings of $3 billion in the fourth quarter of 2006. Despite this bounce, it seems the United States can no longer count on positive income flows to help moderate the growth of its current account deficit.

[7] Total return on U.S. foreign assets includes capital gains, which have been trending up by *MT*'s estimates. But since the source of these gains is not well understood, *MT* warn against counting on continued increases.

[8] Dani Rodrik (2006), "What's So Special about China's Exports?" *China & World Economy* 14 (5), 1-19.

[9] Of course, many of the new U.S. Ph.D.s will be granted to foreign students who may – or increasingly may not – decide to stay in this country.

[10] "Manufacturing Earnings and Compensation in China," *Monthly Labor Review*, August 2005.

[11] Glinskaya, Elena and Michael Lokshin. "Wage Differentials Between the Public and Private Sector in India," World Bank Policy Research Paper 3574, April 2005, cited by *Freeman*.

[12] Shaohua Chen and Martin Revallion. "How Have the World's Poorest Fared since the Early 1980s?" *The World Bank Research Observer*, vol. 19, no. 2, 2004. *Bhalla* estimates a much higher number in *Surjit S. Bhalla, Imagine There's No Country: Poverty, Inequality, and Growth in the Era of Globalization*, Washington, D.C. Institute for International Economics, 2002.

[13] Anders Reutersward, *Labour Protection in China*, OECD Social, Employment and Migration Working Papers No. 30, November 7, 2005.

[14] Hukou refers to China's household registration system, which operates to control access to public benefits like education, health care, and pension rights. Because the system generally limits such access to an individual's birth place, the government has used Hukou to guide labor mobility across China.

[15] *Shankar Acharya* pointed out that only a small fraction of India's labor force is currently employed in the organized – as distinct from the informal – manufacturing sector. He blames a long history of dysfunctional labor laws.

[16] In this connection, the recent passage of Communist China's new law strengthening property rights (first acknowledged in the Chinese constitution in 2004) is an intriguing development.

[17] Other barriers might include India's caste system and the use of multiple spoken languages – 15 in India and at least eight in China – which tend to foster the separate communities or trust networks that are the focus of *Helliwell's* recent work. See also Arvinder Singh, "Labour Mobility in China and India: The Role of Hukou, Caste, and Community" in *China and India: Learning from Each Other*, Jahangir Aziz, Steven Dunaway, and *Eswar Prasad,* eds.: Washington, DC, International Monetary Fund, 2006.

[18] *Banerjee* mentions a basic deposit rate of 10 percent co-existing with a loan rate of 78.5 percent, and local loan rates varying between 48 percent a year and 5 percent *a day* (16,000 percent a year).

[19] *Cooper* notes that the liabilities for private pensions have been an important spur to corporate saving in recent years.

[20] Raising another measurement issue, *Debelle* noted that capital gains, which are more important for U.S. than for foreign investors, are not included in the current account but do show up in balance sheet measures like wealth. It is more appropriate, he argues, and much more reassuring, to measure U.S. net liabilities to foreigners against U.S. wealth rather than against U.S. GDP (see Figure 3).

[21] See, for instance, Ricardo J. Caballero, Emmanuel Farhi and Pierre-Olivier Gourinchas, "An Equilibrium Model of 'Global Imbalances' and Low Interest Rates," NBER Working Paper 11996, February 2006.

[22] Increased resource nationalism has led host countries, including Venezuela, Bolivia, Russia and Iran to renegotiate access and revenue terms. Russia, for instance, has threatened to revoke oil and gas drilling licenses in Siberia and Sakhalin Island on the basis of "safety violations" and "environmental concerns." Investors also worry that Russia may be intent on renationalizing its energy sector.

[23] As *Peter Garber* sees it, some bloc of countries of varying membership has always needed or wanted the stability of a fixed exchange rate; he expects they will continue to do so "for the foreseeable future." But once their domestic financial markets are more fully developed, and they are able make a credible commitment to keeping inflation low and stable, some of these countries may find it easier to shift to a more flexible exchange rate regime.

[24] Or capital surplus, as *Kotlikoff* prefers to call it.

[25] By contrast, in this context, *Cooper* prefers *gross* to *net* measures of saving and investment, in part because it is gross investment that brings new technology.

[26] This estimate uses rather conservative assumptions regarding health care costs and assumes that future generations face the same net tax rates as today's. See Jagadeesh Gokhale and Kent Smetters, "Measuring Social Security's Financial Problems," NBER Working Paper 11060, January 2005, cited by *Kotlikoff*.

[27] The term "Bretton Woods II," coined by *DFG*, refers to the dollar exchange standard adopted at Bretton Woods, NH, in 1944 and in effect until the United States cut the dollar's ties to gold in 1971. In the original Bretton Woods arrangement, the United States maintained the dollar's value in terms of gold, and other countries pegged to the dollar. Under Bretton Woods II, a group of countries is choosing voluntarily to fix or closely tie their currencies to the U.S. dollar.

[28] Supporting this point, *Larry Lau* argued that once capital controls are removed, private Chinese demand for U.S. dollar assets is likely to prove substantial. He also noted that, given the small share of domestic content in Chinese exports, it would take a large RMB appreciation to reduce Chinese exports notably.

[29] Executive Vice President, Markets Group, Federal Reserve Bank of New York.

[30] *Larry Summers* describes a similar scenario with spillovers to global growth in a March 26, 2007, comment in the *Financial Times* (*Lawrence Summers,* "As America Falters, Policymakers Must Look Ahead," *Financial Times*, March 26, 2007).

[31] From a peak in early 1985 to late 1987, the trade-weighted dollar fell almost 40 percent in real terms against other major currencies.

[32] More recently, the Asian Development Bank has also urged central banks to invest their reserves in infrastructure, human capital, or financial assets earning more than U.S. Treasury securities. It points out that earning an additional 500 basis points on half of the region's reserves would yield a dividend equal to 0.8 percent of Asian GDP. Michiyo Nakamato, "Asia states warned on danger of reserves: ADB advises investment plans to avoid asset bubbles," *Financial Times*, March 28, 2007, page 1. See also ADB, *Asian Development Outlook 2007*, March 2007.

[33] By contrast, *Shankar Acharya* suggested prudential measures to address asset price concerns.

[34] According to the U.S. Comptroller General's January 2007 testimony to the U.S. Senate Budget Committee, under conservative "intermediate" assumptions, expenditures for Social Security, Medicare, and Medicaid are projected to rise from 9 percent of GDP today to 15.5 percent in 2030. As a result, the fiscal deficit will likely deteriorate from near balance in 2001 to minus 20 percent of GDP ("out of control" as the Comptroller General sees it) within 30 years.

[35] *Suzanne Berger* also proposed strengthening U.S. wage insurance programs to help counter the growing popularity of protectionist "remedies."

[36] With apologies to Reinhold Niehbuhr as well as to *Eswar Prasad*, who advocated first setting one's own house in order – not only to reap the immediate internal benefits but also to strengthen the economy against future external shocks.