Global Economic Prospects as of September 2009: Onward to Global Recovery

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Overview

The great global recession of 2008 and early 2009 is over, and worldwide economic recovery is now under way. Most forecasters expect that the pace of this recovery will be tepid, especially in the United States and other industrial countries, with unemployment continuing to rise into next year and with little reduction in margins of slack before 2011 at the earliest. Some fear a "double dip" where economies fall back into recession at a relatively early stage of recovery.

In marked contrast, the view in this paper is that my early April 2009 forecast of a V-shaped recession and recovery is still the most likely course—in accord with the Zarnowitz rule: Deep recessions are typically followed by steep recoveries. Indeed my revised forecast takes note of the fact (not known in early April) that world recession did bottom out as predicted around the middle of this year, and the new forecast now projects somewhat higher real GDP growth looking forward than was anticipated in April. Indeed, while the forecast for global real GDP growth this year (on a year-over-year basis) is reduced to –1.1 percent (versus –0.8 percent in early April), the forecast for 2010 is upgraded to 4.2 percent from 3.7 percent. The reduction of the global growth forecast for this year reflects a downgrade of the forecast for the advanced economies, to –3.3 percent from –2.8 percent, and an upgrade of the forecast for emerging-market and developing countries to 1.9 percent from 1.7 percent. The upgrade to the forecast for global growth next year reflects upgrades to the forecasts for both the advanced economies (by 0.3 percent) and the emerging-market and developing economies (by 0.7 percent).

My baseline forecast for the world economy and for major regions and countries are presented in table 1. For comparison, the forecasts released by the International Monetary Fund (IMF) on July 8, 2009 are also reproduced in this table. This comparison has two notable features: My baseline forecasts for 2009 are generally modestly above the corresponding IMF forecasts, partly reflecting more positive economic data that have come in since early July.

In contrast, my baseline forecasts for 2010 are considerably higher than the corresponding IMF forecasts, especially for the advanced economies. This difference reflects divergent assessments of the likelihood of a moderately vigorous recovery. The IMF is somewhat more pessimistic than the average of most published forecasts but shares the general assessment that the recovery is likely to be exceptionally sluggish.

Table 1 Real GDP growth forecasts for 2009 and 2010, Mussa baseline and IMF July 2009 (year-over-year percent changes)

Country/region	2008	Mussa 2009	Mussa 2010	IMF 2009	IMF 2010
World	2.7	–1.1	4.2	–1.4	2.5
Advanced economies	0.5	–3.3	3.3	–3.8	0.6
United States	0.4	–2.4	4.0	–2.6	0.8
Japan	–0.7	–5.2	2.5	–6.0	1.7
United Kingdom	0.7	–4.0	2.5	–4.2	0.2
Canada	2.0	–2.0	3.4	–2.3	1.6
Euro area	0.6	–3.7	2.3	–4.8	–0.3
Germany	1.0	–4.8	2.2	–6.2	–0.6
France	0.3	–3.0	2.2	–3.0	0.4
Italy	–1.0	–4.5	1.8	–5.1	–0.1
Other euro area	1.4	–3.0	2.5	—	—
Other advanced	1.6	–3.5	4.5	–3.9	1.0
Developing countries	7.6	1.9	5.4	1.5	4.7
Asia	7.9	6.0	7.8	5.5	7.0
China	9.0	8.3	9.0	7.5	8.5
India	7.1	6.4	7.5	5.4	6.5
Other developing Asia	6.3	0.5	5.5	—	—
Latin America	4.1	–2.3	3.4	–2.6	2.3
Brazil	5.1	nil	3.6	–1.3	2.5
Mexico	1.4	–5.8	3.0	–7.3	3.0
Central and Eastern Europe	3.0	–3.5	2.6	–5.0	1.0
Commonwealth of Independent States	5.5	–4.8	2.6	–5.8	2.0
Middle East	4.2	2.0	4.0	2.0	3.7
Africa	5.2	2.0	4.0	1.8	4.1

More specifically, for the United States, the benchmark revisions to US GDP released on July 31 (which cut previous estimates of real GDP for 2008 and the first quarter of 2009) dictate a slightly larger decline, from –2 to –2.4 percent, in my baseline real GDP growth forecast (year-over-year) for 2009. Real GDP growth during the second half of 2009, however, is now expected to be somewhat stronger than the early April forecast, with a rise of 1.7 percentage points that will reverse the decline of the first half. Real GDP during 2010 is expected to grow 5 percent on a fourth-quarter-to-fourth-quarter basis (up from 4.8 percent forecast in early April) and is projected to rise 4 percent (rather than 3.6 percent) on a year-over-year basis.

This implies that the cumulative rise of US real GDP from the second quarter of 2009 to the final quarter of 2010 will be almost 7 percent, or about $875 billion in 2005 chained dollars. In contrast, the average of the 50 forecasts in the September 2009 Blue Chip survey envisioned only a $426 billion increase in US real GDP over this six-quarter period, a cumulative rise of 3.3 percent. The difference between these forecasts is substantial. In the average Blue Chip scenario, the US unemployment rate continues to creep up above 10 percent by early next year and shows little decline through year-end. In my forecast, the unemployment rate peaks this year at or a little below 10 percent and falls below 9 percent by the end of 2010.

The seeming optimism of my US forecast, however, is somewhat deceptive. Excluding the short and mild recession of 1990–91 and the exceptional mild (non) recession of 2001, real US GDP growth in the first six quarters following recessions since 1950 has averaged 10 percent. This is equivalent to a rise of $1,300 billion measured in 2005 chained dollars from the base of $12.892 trillion estimated as the level of real GDP in the second quarter of 2009. Thus, the present forecast envisions only two-thirds the growth that the US economy has normally enjoyed during the six quarters following recessions of the 1950s through the 1980s.

Moreover, while my forecast envisions a meaningful reduction in the margin of slack by the end of next year (from an output gap of about 8 percent at mid-2009), it nevertheless foresees a large remaining output gap (of about 5 percent of GDP) at end 2010. Assuming that real GDP grows at about a 4 percent annual rate after 2010, it will take until 2014 for the output gap to be eliminated and for the unemployment rate to decline to the neighborhood of 5 percent.

Looking to the other advanced countries, slightly positive growth in the second quarter has been reported for France and Germany and significantly positive growth has been reported for Japan. Growth in other advanced countries generally continued to contract in the second quarter, albeit at much lower rates than in the preceding two quarters.

For the other advanced economies, the Zarnowitz rule is also expected to apply—as already envisioned in the early April forecast. However, even with quite vigorous rebounds in the second half of this year (and gains for some countries in the second quarter), the large output declines in the first quarter are unlikely in most cases to be fully reversed by year-end. Thus, Q4 to Q4 growth for the aggregate of other advanced countries (and, more specifically, for Western Europe and Japan) is likely to be negative for 2009. But my forecast of a decline of about 1.8 percent is decidedly more optimistic than the IMF forecast (of July 8) of a 3.8 percent decline.

The much larger than predicted declines in real GDP for most other advanced economies now reported for the first quarter of 2009 (and the relatively heavy weight of these quarterly results in the year-over-year result) dictate modest downward revisions to 2009 growth forecasts for most of these countries—in the aggregate from –3.6 to –4.0 percent. For 2010 on a year-over-year basis (where the first quarter results for 2009 have no effect), growth forecasts are boosted moderately upward to 2.9 percent (from already relatively optimistic 2.7 percent) for two main reasons: (1) Sharper than expected downturns in late 2008 and early 2010 are likely to be more powerfully reversed in the subsequent upturn; and (2) mutual reinforcement of output declines on the way down is likely to be symmetrically replaced by mutually reinforcing upturns on the way back up.

For all of the advanced economies, including the United States, growth this year is forecast to be –3.3 percent versus an early April forecast of –2.8 percent. For 2010, the year-over-year forecast for the advanced economies is upgraded from 3.0 to 3.3 percent.

Looking to the emerging-market and developing countries, China and India have been leading the global recovery. For China, the estimated quarter-on-quarter annualized GDP growth rate, which fell to a decade low of about 4 percent at the end of 2008, picked up to nearly 8 percent in the first quarter of 2009 and to about 15 percent in the second quarter. Quarterly growth rates will likely fall back to the 8 to 10 percent range over the next six quarters, implying year-over-year growth rates of about 8.3 percent for this year and 9 percent next year.

For India, growth also slowed but remained positive late last year and has picked up again this year. Growth forecasts are now up to 6.4 percent (from 5 percent in early April) for 2009 and to 7.5 percent (from 6.3 percent) for 2010.

Elsewhere in emerging Asia, many economies (including Hong Kong, Malaysia, the Philippines, Singapore, South Korea, Taiwan, and Thailand) snapped back to sharply positive growth in the second quarter after large output declines in the preceding two quarters. Some other countries in the region, such as Indonesia, appear to have gotten through the period without serious output declines and are now on the upswing. Nevertheless, year-over-year GDP growth for emerging Asia (excluding China and India but including Hong Kong, Singapore, South Korea, and Taiwan) is likely to be slightly negative this year but followed by growth of 5 percent or better next year. For all of developing Asia (including China and India but excluding Hong Kong, Singapore, South Korea, and Taiwan, which are included in the category of "other advanced economies"), growth this year is now forecast to be 6 percent (up from 5 percent in early April), and growth for next year is now expected to be 7.5 percent (up from 6.8 percent in the early April forecast).

In Latin America, signs of recovery are less apparent than in emerging Asia, but the recessions do seem to be bottoming out. Brazil may achieve slightly positive growth this year, but Mexico will likely see output decline almost 6 percent. For the region as a whole, GDP is expected to fall 2.3 percent this year (versus a decline of 1.8 percent in the early April forecast). For 2010, the regional forecast is upgraded modestly to 3.4 percent in line with the Zarnowitz rule.

Almost all of the countries of Central and Eastern Europe and the Commonwealth of Independent States (perhaps excluding Poland) will see significant output declines this year, with double-digit losses for the Baltic States and Ukraine and output declines of 6 percent or so for Russia and Turkey. For the two regions together, an output decline of 4 percent is now projected for 2009—down 1 percent from the early April forecast. With evidence that the steep output declines of late 2008 and early 2009 are abating, it is forecast that growth for the two regions combined will recover to about 2.5 percent for 2010.

In contrast, the economies of the Middle East and Africa have generally held up fairly well during the great global recession, despite the enormous declines in many commodity prices late last year. Growth this year in both regions is expected to be about 2 percent—in line with the early April forecast. With recovery in the rest of the world economy and in many commodity prices (although not to their 2008 peaks), growth for 2010 is expected to strengthen to 4 percent—also as envisioned in the early April forecast.

Key Issues

My baseline forecast just described is substantially more optimistic than almost all other forecasts, especially for the United States and other advanced economies. It is important therefore to examine the reasons for this relative optimism and correspondingly why I reject the views of many pessimists who foresee a prolonged period of very sluggish growth rather than a more normal cyclical recovery.

The performance of China and (to a lesser extent) India are an important part of my story of global recovery, with particularly important implications for the rest of Asia. My colleague Nicholas Lardy will cover developments and prospects in China. I add only a little beyond what has already been said about China or India.

The main issues to be examined are the following. First, a mood of pessimism usually pervades the early stages of recovery because most people, including most professional forecasters, are unable to see the economic forces that are likely to drive a sustained recovery. This is especially so for the United States at present because growth of consumer spending (which accounts for 70 percent of GDP) appears likely to be restrained by (i) losses in household wealth due to the decline in home prices and equity values, (ii) heavy household debt burdens and constraints on consumer credit, and (iii) high rates of unemployment and continuing fears of job loss. In this environment, what will drive sustainable recovery?

Second, severe problems in financial markets and weaknesses in financial institutions, especially in the United States and some other advanced countries, have clearly played an important role in the global recession. Despite aggressive measures that have stabilized conditions in financial markets and helped to recapitalize and restructure key financial institutions, severe problems are still thought to afflict a number of important institutions, and losses from past imprudent lending are expected to continue to mount. Based on experience in earlier recessions associated with important financial crises (analyzed by Kenneth Rogoff and Carmen Reinhart and reviewed in the April 2009 *World Economic Outlook*), many analysts conclude that the recovery from the present global recession is likely to be exceptionally subdued. To what extent is this conclusion likely to prove valid? Is it really necessary, as some analysts and many policy officials have argued, to pursue urgently further deep reforms of the financial system in order to assure at least a moderate paced recovery?

Third, the great recession of 2008–09 was global in scope, as well as very deep for most countries. Some (including the IMF staff in the April 2009 *World Economic Outlook*) have argued that, based on experience in past global recessions, the recovery from the recent recession is likely to be sluggish and protracted. Is this conclusion warranted?

Fourth, it is often asserted that the underlying causes of the great global recession owe much to key international financial imbalances that developed during the preceding expansion and spread through the global financial system. The concern is raised that some of these key imbalances might reemerge during the current expansion, thereby laying the groundwork for the next great global recession. How serious is this concern?

Fifth, extraordinary monetary and fiscal policy easing has been applied in many countries to combat the global recession. At some point most of this policy easing will need to be unwound to forestall a serious increase of inflation (in the case of monetary policy) and to bring budget deficits onto sustainable paths (in the case of fiscal policy). Uncertainties about the appropriate timing of policy tightenings and about the political willingness to undertake them contribute to fears about the possibility of a "double dip" recession. This could be either because policies are tightened too much too soon or because of failure to tighten adequately soon enough. In the former case, a recession could come early; in the latter case, the recession would come somewhat later after an upsurge of inflation. The question is: What is the likelihood of a double dip recession from this or some other source?

Drivers of US Economic Recovery

To understand the likely drivers of the global economic recovery, it is useful to focus first on the United States and then turn more briefly to some other major economies.

For the reasons previously noted, growth of consumption spending in the United States will likely be relatively subdued in comparison with its normal behavior. Specifically, for my baseline forecast I assume that households will raise their saving rate from 5 percent in 2009Q2 to 7 percent by the final quarter of 2010. This assumption allows for the likelihood that (even with the stabilization of house prices, moderate increases in equity values, improving labor market conditions, and rising consumer confidence) households will desire a meaningful further increase in their saving rate.

Assuming (subject to subsequent justification) that real GDP rises by 6.8 percent or $875 billion (in 2005 chained dollars) over this six-quarter period, the implication is that real consumer spending would rise by only 5 percent or $460 billion.[1] This does not mean that consumption spending would be lifted primarily by its own bootstraps. The projected rise in consumption spending depends on the projected rise in GDP, and the projected rise in GDP of $875 billion obviously must involve much more than the projected rise of $460 billion in consumption.

A reasonable projected rise in real gross private domestic investment is expected to provide most of the additional upward push to real GDP. Real inventory investment was running at an estimated annual rate of –$159 billion in the second quarter of this year; production cuts during the recession have overshot the fall in final demand. With even minimal recovery, businesses will want to raise inventory investment at least back to zero; that is, they will want at least to stop the decline of inventory stocks. Most probably, businesses will want to replenish depleted stocks (notably stocks of autos that were suddenly depleted by the "cash for clunkers" program) and will then want to raise stock levels in line with rising final sales. This is the classic inventory investment rebound that has played a key role in the initial phase of past business cycle recoveries. Between the middle of this year and the end of next year, it is reasonable to expect that the inventory investment rebound will contribute about $180 billion to the rise in real GDP.

Business investment in equipment and software did not become bloated during the recent expansion (as it did in 1999 to 2000), and such investment has declined 22 percent since the start of the recession—to a level at which net investment is probably zero or slightly negative. Normally in a business cycle, this category of investment moves closely in phase or with a slight lag to movements in real GDP. It is reasonable to suppose that during the first six quarters of the present recovery, businesses will want to raise real investment in equipment and software by half of the cutback during the preceding six quarters of recession. This implies a contribution of about $125 billion to the rise in real GDP by the end of 2010.

Movements in gross private investment in nonresidential structures typically lag the rest of the business cycle, and this appears to be true on the present occasion. Real private investment in nonresidential structures peaked in the third quarter of 2008 and declined 17 percent by mid-2009. Further declines are likely through mid-2010, and a slight upturn by year-end would still leave this category of real private investment about $50 billion below its mid-2009 level—down 28 percent from its 2008 peak.

Real residential investment peaked at the end of 2005 and was already down by 27 percent when the US recession began at the end of 2007. It was down 55 percent from its peak (from $783 billion to $345 billion) at mid-2009. Recent data indicate that residential investment bottomed in the second quarter and has begun to turn upward, especially for single family homes. Home prices also appear to have stabilized after a decline of about one-third (according to the Case-Shiller index). It will be a long way back from the bottom where new housing starts fell to an annual rate of barely 500,000 units to anywhere near the peak

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[1] If the ratio of real consumption to real GDP were constant at the 2009Q2 ratio, an increase of $875 billion in real GDP would imply a rise of $625 billion in real consumption. The projected rise of only $460 billion in real consumption allows room for increased savings.

when housing starts exceeded 2 million units. But, with housing affordability at a record (due to low mortgage rates for qualified buyers and reduced home prices) and with fears of large further falls in house prices abating, it is reasonable to expect that, in the context of a general economic upturn, real residential investment might recover one-third of the ground lost since the late 2005 peak. This implies a contribution of about $150 billion to the rise of real GDP between mid-2009 and end 2010.

Adding up the projected contributions from the components of gross private domestic investment yields a total contribution of $405 billion to the rise of real GDP by year-end 2010. The likely rise in real government spending, aided by the stimulus package passed in February 2008 and subsequent budget actions, is reasonably projected at about $100 billion—a cumulative rise of 4 percent over 6 quarters. (This includes the contribution of the stimulus package to increasing government purchases but not to increasing private spending. Absent the stimulus package, spending by state and local governments would have fallen significantly.) It follows that the projected rise in real domestic demand (or "real gross domestic purchases"), which is the sum of consumption, investment, and government purchases, by end 2010 is $965 billion, or 7.5 percent of the level of real GDP in 2009Q2.

For real net exports, the final main component of GDP, it is reasonable to expect some deterioration as real imports rise somewhat more rapidly than real exports. Several factors, however, point to much less deterioration than occurred during the initial stages of the recovery from the last deep US recession—the Reagan recovery from end 1982 to mid-1984.

During the first six quarters of the Reagan recovery, US real domestic demand (real gross domestic purchases) increased a phenomenal 14 percent, far outstripping real domestic demand growth in the United States' trading partners (especially in those developing countries caught up in the debt crisis that began in the summer of 1982). At same time, the real effective foreign exchange value of the US dollar (which was already quite strong by the end of 1982) soared, thereby shifting global demand away from US-produced goods and services and towards goods and services produced in the rest of the world. The result was that US exports grew modestly while US imports surged massively, leading to a deterioration of US real net exports by about 2 percentage points of GDP.

My baseline forecast for the cumulative rise in US real domestic demand through the end of 2010 is 7.5 percent of the level of real GDP at mid-2009—barely half the pace in the Reagan recovery. Recovery of domestic demand in some countries (most notably China) is already ahead of the pace in the United States, and there is good reason to expect that the pace of recovery in the rest of the world will not, on average, lag significantly behind that in the United States. Also, the real effective exchange rate of the US dollar begins this recovery at a level that is well below its peak in early 2002, and there is no reason to anticipate that the exchange rate will soar upward as it did during the Reagan recovery. Thus, it is reasonable to allow for a deterioration of US real net exports by about two-thirds of one percent of GDP through end 2010 or about $90 billion in 2005 chained dollars.

Subtracting this estimate of the deterioration in real net exports from the projected gain in real domestic demand yields the projected gain of $875 billion in real GDP by the final quarter of 2010—a 6.8 percent cumulative rise over the estimated level of real GDP in 2009Q2.

The exact numbers in this forecast scenario (reported in table 2) are illustrative of how US real GDP could plausibly rise by nearly 7 percent by the end of 2010. However, even if the overall figure proves accurate, the details of its composition will surely differ somewhat from the baseline scenario. Moreover, plausible adjustments in the assumptions underlying the scenario could easily push the cumulative outcome up or down by 1 or 2 percentage points. The baseline forecast is the center of a distribution with a considerable margin of uncertainty.

Table 2 Forecast scenario for the US economy, 2009Q2 to 2010Q4
(billions of 2005 real dollars, unless otherwise noted)

Component	**2009Q2**	**Mussa baseline, 2010Q4**	**Change, 2009Q2–2010Q4**
Real GDP	12,892	13,767	875
Consumption	9,187	9,647	460
Gross private domestic investment	1,453	1,858	405
Nonresidential structures	403	353	–50
Equipment & software	868	1,093	225
Residential	345	495	150
Inventory investment	–159	21	180
Government purchases	2,567	2,667	100
Net exports	–332	–422	–90
Domestic demand	13,218	14,183	965
Unemployment rate (percent)	9.3	8.8	–0.5
Housing starts (SAAR)	541,000	1.1 million	660,000
Auto sales (SAAR)	9.6 million	13 million	3.4 million

SAAR = seasonally adjusted annual rate

For example, moderately stronger recovery in residential investment and in business investment in equipment and software might plausibly contribute another $100 billion to the gain in real GDP. Consumption spending would respond to stronger income growth, boosting the gain in real GDP by another $180 billion. Allowing for some increased stimulus to imports and corresponding deterioration of real net exports, the gain in real GDP by end 2010 would be boosted about a further 2 percentage points to nearly a 9 percent cumulative gain from the level of real GDP in 2009Q2. This gain would still be l percentage point below the average cumulative gain during the initial six quarters of recovery following the recessions of the 1950s through the 1980s, and nearly 3 percentage points below the pace in the initial stage of the Reagan recovery.

On the other hand, it is not outrageous to suppose that households might want to raise their saving rates somewhat more than has been assumed or that investment might bounce back somewhat less vigorously than assumed. In such circumstances, the cumulative gain in real GDP might plausibly be only about $650 billion or 5 percentage points, rather than the baseline forecast of a gain of $875 billion or 6.8 percentage points.

There is, however, a plausible lower limit to which one may push this exercise. Households may want to increase their saving rates; but allowing for this, consumer spending is virtually certain to rise by at least as much as the combined contributions from the other components of real GDP. Barring some further significant adverse shock (which, by definition, is not foreseeable), inventory investment will recover at least to zero by end 2010. The fiscal stimulus, which has been somewhat late in arriving, will contribute significantly to demand growth between now and end 2010, and more stimulus may well be added if recovery is exceptionally sluggish or fails to materialize. Together, these two factors should contribute at least $200 billion to the cumulative rise of real GDP by end 2010. Residential investment appears to have begun to turn upward amidst evidence of stabilization of house prices and increases in home sales. At least modest housing recovery from extremely depressed levels is an extremely good bet. Business investment in equipment and software (which is now near zero in net terms) will recover somewhat if the economy grows at even a quite modest pace. Further declines of investment in nonresidential structures are unlikely to entirely offset gains of investment in equipment and software. With the recovery in the rest of the world and with a competitive exchange rate for the US dollar, US real net exports are unlikely to deteriorate by any significant amount if the US recovery is very sluggish. Thus, the combined contributions from all components other than real consumption should be at least $250 billion to $300 billion, implying a rise of real GDP by end 2010 of at least $500 billion to $600 billion.

Accordingly, it is difficult (at least for me) to conclude that the September Blue Chip average forecast of a cumulative real GDP gain of $426 billion or 3.3 percentage points by year-end 2010 is a forecast that reasonably balances the downside risks with the upside potential. Surely, a reasonable forecast must acknowledge at least a modest probability for outcomes near to the average growth achieved in the initial stages of recoveries from earlier deep recessions. In contrast, the lower end of the range of forecasts in the Blue Chip survey and the even more pessimistic musings of some commentators, while not impossible, would appear outside the range of plausibility implied by experience in past business cycles.

Looking beyond 2010, it is reasonable to expect that the US economic expansion will continue through 2011 and beyond with annual growth rates of real GDP somewhat exceeding the potential growth rate (of slightly more than 2½ percent) for another three or four years.[2] The basis for this very general projection is two-fold: (1) Even under my relatively optimistic forecast for the performance of the US economy through 2010, a large margin of slack will exist at end 2010 with an unemployment rate between 8 and 9 percent. (2) Absent significant shocks that impair or accelerate the normal pace of economic advance, the normal processes of a well-functioning economy over time tend to gradually return activity levels toward the potential growth path.

However, recoveries from deep recessions rarely proceed completely smoothly even barring major interruptions. And significant unforeseeable shocks could cause serious disruptions before the US economy would otherwise be expected to regain its potential growth path in about 2014. Thus, I do not now offer specific numerical forecasts of annual US real GDP growth for 2011 and beyond—only a general suggestion that annual growth rates in the range of 3½ to 4 percent are near the center of the probability distribution of likely results over the next few years.

Drivers of Recovery in the Rest of the World

While virtually all countries have seen significant economic downturns in the recent global recession, the causes have not been exactly the same. Similarly, while it is now forecast that most countries will enjoy reasonably robust and mutually reinforcing recoveries, the forces underlying these recoveries will differ somewhat across countries.

In this regard, brief remarks about China and India are warranted (leaving the main discussion of China to Nicholas Lardy). With the aid of substantial stimulus from

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[2] The IMF staff in its report on the 2009 Article IV consultation argues that the potential growth rate for the US economy over five years or so is only about 1½ percent. This estimate of potential growth implies a much lower projection for actual growth than my baseline. I do not believe that the potential growth rate of the US economy has fallen as suggested by the IMF staff analysis.

government policies of fiscal easing and credit expansion, the Chinese economy snapped back from sluggish growth in the fourth quarter of 2008 to about 8 percent annualized growth in 2009Q1 and to nearly 15 percent annualized growth in 2009Q2. Notably, the recovery in China was driven by growth of domestic demand, with real net exports making a significant negative contribution to the rise in GDP in the first half of 2009. Thus, at least so far in this global recovery, China is making a net positive contribution to demand for goods and services produced in other countries.

In India, growth also slowed considerably but did not turn negative late last year and has accelerated again in 2009. The slowdown and the acceleration are largely attributable to movements in domestic demand, with the Indian government adding further fiscal stimulus after its recent election victory.

Developments in Indonesia are broadly similar to those in India: GDP growth slowed but did not turn negative late last year and has subsequently accelerated primarily on the back of rising domestic demand. The story in several other important Asian emerging-market economies (including Hong Kong, Malaysia, Singapore, South Korea, Taiwan, and Thailand) is considerably different. In these economies, sharp downturns of real GDP late last year and early this year reflected sharp falls in exports, as well as the knock-on effects on domestic demand growth. Symmetrically, for the countries that have so far reported sharp bounce-backs of real GDP in 2009Q2, resurging exports have been key, with domestic demand coming along for the ride. Looking forward, continued recovery of exports will likely be important to prompt further increases of domestic demand and real GDP.

Japan is in much the same camp. The precipitous drop in Japanese real GDP late last year and early this year reflected an enormous fall-off in exports with strong knock-on effects on domestic investment and, to a lesser extent, consumption. The recovery to moderately positive real GDP growth in the second quarter corresponded with a rebound in exports, with some recovery in consumption and a moderation of the rate of decline in domestic investment. Government policy is providing some useful support to recovery, but further gains in exports are likely to be key to continued recovery. In that case, domestic investment should rebound strongly, and consumption will be pulled along in the wake. In this regard, the continuing strong recovery in China, feeding through to help other Asian emerging-market economies, will be most helpful for Japan. With recovery underway in Japan's industrial-country trading partners, the prospect for a classic V-shaped recovery is good, taking appropriate account of the fact that Japan's potential growth rate is quite low.

Germany's situation is similar to Japan's in that the sharp falls in exports (which have a large share in German GDP) drove large declines in real GDP. Not surprisingly, domestic investment dropped significantly in the face of collapsing exports, while consumption spending remained reasonably well sustained. Faced with rapidly rising unemployment late last year, the German government's attitude toward stimulative fiscal policy became more favorable, and some help for recovery will come from this source. The main reason for optimism about Germany's continuing recovery (aside from the usual inventory rebound following excessive production cuts) is the likely rise in German exports as recovery proceeds in virtually all of Germany's important export markets.

France's economy was substantially less affected by falling exports than Germany's, and the decline of real GDP during the recession was significantly less. Nevertheless, the recession was quite deep by normal French standards. Aided by stimulative fiscal and monetary policies and rising exports to key trading partners, the normal processes of cyclical recovery may be expected to operate in France, leading to moderately vigorous increases in real GDP at least through the end of 2010.

The Italian economy has performed poorly for most of the past decade, and it was hit hard during the recession both by falling exports and weakening domestic demand (both consumption and investment). The rate of economic decline moderated substantially in the second quarter, and a rebound may be expected on the basis of inventory rebuilding, gains in exports as trading partners recover, and other normal processes of cyclical recovery following a deep recession. However, the international cost-competitiveness of Italian industry has deteriorated considerably during the past decade (especially relative to Germany), and there is no easy or quick way to correct this. Also, the precarious fiscal situation of the Italian government with its large outstanding debt precludes the use of stimulative fiscal policies to boost recovery on a sustained basis. Thus, recovery may be less buoyant and well-sustained than in Germany, France, and a number of smaller Western European countries.

In contrast with Italy, the UK economy maintained moderately strong growth with low inflation for 17 years through 2007. The recession hit the economy hard and across the board. The financial sector is especially important in the UK economy, and it absorbed substantial damage both from the global financial crisis and from domestic sources (especially problems with mortgage credit). Financial stabilization has been achieved and will likely be sustained, but recovery of the financial sector to its former glory is a long way off. The loss of income and wealth in the financial sector will probably continue to affect home prices and residential investment, as well as restrain somewhat the growth of consumer spending. The downward correction of the value of sterling relative to the euro is good news for beleaguered British manufacturing, but this may take some time to have a significant impact on the overall economy.

In Central and Eastern Europe and the Commonwealth of Independent States , several countries have suffered severe recessions. Recoveries in most cases may be quite vigorous as has usually been the case for emerging-market economies that have suffered financial and balance of payments crises and deep recessions in the past 20 years. It is noteworthy that the prospects for rapid recovery in these regions now are far better than the prospects for recovery from the deep recessions that generally followed upon the collapse of the Soviet empire at the beginning of the 1990s. In that earlier situation, the basic economic, social, and political structures of these countries collapsed and had to be replaced by new structures. Inevitably, this restructuring took time, and economic downturns were deep and prolonged while new economic, social, and political structures were gradually created. In the present situation, such fundamental restructuring is not generally the issue, and normal cyclical rebounds following deep recessions are generally to be expected.

In other regions, emerging-market and developing countries have typically been less affected by the present global economic and financial crisis than by earlier such episodes. In most countries that have recently suffered economic downturns, the normal processes of cyclical recovery may be expected to operate as the world economy in general enjoys an economic rebound.

Implications of Financial-Sector Difficulties

The factors most frequently emphasized in arguments that the recovery from the global recession should be expected to be unusually anemic are continuing weaknesses in financial markets and institutions. Specifically, it is argued that previous economic downturns where financial-sector problems have played a leading role have tended to be unusually deep and prolonged, and recoveries have tended to be unusually tepid. As financial-sector problems have clearly played a leading role in the present global economic downturn, the same should be expected this time. More specifically, key financial institutions in the United States and, perhaps even more so, in some European countries still have large volumes of troubled assets on their balance sheets and face the possible need to recognize hundreds of billions of dollars of additional losses. The worry is that because of these weaknesses, key financial institutions will be unable or unwilling to supply adequate credit to support a meaningful economic recovery and, if crises were to re-emerge in the financial sector, could even tip the world economy into renewed recession.

No doubt, weaknesses in the financial sector and especially the acute financial crisis that paralyzed key global financial markets last autumn played a key role in the global recession. Most deep recessions of the past have also featured severe problems in financial sectors. In some cases, as at present, financial excesses and their unwinding have preceded and been a key cause of the subsequent recession. In other cases, stress in financial sectors has been more the consequence than the initiating cause of the economic downturn. In all cases of deep recession, severe stress in the financial sector has interacted with the general weakening of economic activity to exacerbate the downturn. Also in all of these cases it has generally been necessary to stabilize conditions in the financial sector—usually with the aid of substantial government intervention—in order to end the downturn and lay the foundation for recovery.

However, it has not always been true that deep reforms have restored financial sectors to robust health as a precondition for vigorous economic recovery or often even as an accompaniment to the initial stages of such recovery. Instead, the regularity has been that once reasonable stability is achieved in the financial sector, economic recovery proceeds and, in the reverse of the process that operates during the downturn, it is primarily the economic recovery that restores reasonably good health to the financial system. Some examples usefully illustrate this important point.

The Great Depression in the United States in the 1930s certainly qualifies as a very deep recession in which problems in the financial sector played a leading role—both as cause and effect of other developments in the severe economic downturn from 1929 to 1933. Using annual data, US real GDP fell by 26 percent between 1929 and 1933, and it was not until 1936 that real GDP recovered its 1929 level. If quarterly data were available, they would probably show real GDP declined by more than 30 percent between mid-1929 and mid-1933 and then recovered to its mid-1929 level by mid-1936. By any reckoning, the Great Depression from peak to trough and back to the pre-contraction level took seven long years.

This, however, is not the point. The point is the shape and pace of the recovery during the initial episode of the Great Depression. It took roughly four years for real GDP to fall about 30 percent, and it took only about three years for that ground to be regained. This is not a contradiction of the Zarnowitz rule; it is the essence of the Zarnowitz rule.

What was the role of the financial sector in all of this? Economists from Milton Friedman and Anna Schwartz to Ben Bernanke agree that the massive contraction of money and credit and the deep disruption of the financial system between 1929 and the spring of 1933 contributed much to the depth of the Great Depression. The Bank Holiday of March 1933, introduction of deposit insurance, and other government interventions more or less stabilized financial conditions by the summer of 1933. It is not the case, however, that the financial system was massively reformed and restored to robust health by the summer of 1933 or any time soon thereafter. Depositors remained nervous about banks, and banks were nervous about lending and held large excess reserves as protection against runs and as reassurance to depositors. Thus, the great recovery of real GDP beginning in the summer of

1933 was achieved with a banking and financial system that had been stabilized but was not robust.

The great recovery restored real GDP to its 1929 level, but it was still well below its trend growth path when a sharp recession hit the US economy in 1937. Quarterly data (if they were available) would show that this recession was deeper than any in the postwar era. In accord with the Zarnowitz rule, recovery was also steep, with economic activity reaching its pre-recession level within a year of the recession trough.

Was this recession the consequence of financial-sector weaknesses left over from the Great Depression? Not really. Even with the great recovery following the Great Depression, banks wanted to hold large excess reserves. By 1936, the Federal Reserve increasingly regarded these large excess reserves as posing significant inflationary risks if banks should suddenly decide to make better use of these reserves by lending them out in a massive expansion of bank credit. To forestall this possibility, the Fed sharply raised reserve requirements. The banks, which wanted to hold large excess reserves, as protection against bank runs and as reassurance to their depositors, responded by cutting back lending to restore excess reserves to desired levels. As Milton Friedman and Anna J. Schwartz argue persuasively in their *Monetary History of the United States*, this policy-induced contraction in money and credit was the primary cause of the 1937–38 recession. Tightening of fiscal policy by the Roosevelt administration probably also contributed. Clear recognition of the history of these policy mistakes by senior officials at the Federal Reserve and in the Obama administration indicates that their repetition in present circumstances in highly unlikely.

All of this points to one clear conclusion. No reasonable lesson can be drawn from US experience during the Great Depression that supports the notion that recovery from the deep recession of 2008–09 should be expected to be unusually sluggish.

More recently, the deep US recessions of 1973–75 and 1980–82, and even the relatively mild recession of 1990–91, were associated with considerable financial stress (even though imprudence of financial institutions was not a leading cause of these recessions). In these recessions, many leading financial institutions became substantially insolvent valuing their balance sheets on a mark-to-market basis. These de facto insolvencies were effectively concealed by the historical value accounting applied to most assets, but the stress was very great. As the recoveries began from these earlier recessions, major financial institutions were almost surely in worse condition, properly measured, than major US financial institutions are today (when the situation is much improved from last autumn). And, in these earlier episodes little was done to restructure or recapitalize troubled institutions during the recessions or even well into the recoveries. (Continental Illinois National Bank was intervened only in 1984, and the deep problems of the savings and loan industry were not addressed until 1989.) Nevertheless, recoveries proceeded and were quite vigorous in the two deep recessions. In the present case, especially in the United States and the United Kingdom, very vigorous actions have already been taken to close, restructure, and recapitalize weak financial institutions—suggesting that continuing problems in the financial sector may be even less of a barrier to recovery than in past episodes.

Japan in the 1990s is usually cited as a key example where continuing weaknesses in the financial sector contributed importantly to protracted economic weakness. This is probably correct, at least up to a point. In my role at the IMF I was among those who as early as 1994 were urging the Japanese authorities to be more forthright in recognizing and dealing with substantial weaknesses in the banking system. However, it is too much of a stretch to say that the relatively mild recession that Japan experienced in 1992–93 was largely the result of weaknesses in the banking system, rather than the more direct consequences of the huge decline in equity values and real estate prices that began two to three years before the recession. Similarly, the relatively tepid recovery from the 1992–93 recession was not importantly the consequence of weaknesses in Japanese banks but rather was mainly attributable to (i) the slowdown of potential growth in Japan, (ii) the fact that the recession was relatively mild (making the Zarnowitz rule irrelevant), and (iii) the fact that Japanese economic policies blunted the immediate negative economic impact of the collapse of the "bubble economy" but spread that impact over a longer period of years rather than precipitating a sharp and deep recession followed by a strong recovery.

This last point is similar to the phenomenon in the 2001 (non) recession in the United States. Strong monetary and fiscal policy stimulus (the Bush tax cuts) blunted the downward economic impetus from the sharp drop in stock prices after their March 2000 peak. Indeed in the most recently revised data, real GDP did not decline during the period of recession recognized by the National Bureau of Economic Research. Rather, there was a long period of very sluggish GDP growth, from mid-2000 through the first quarter of 2003, during which the unemployment rate moved up from under 4 percent to over 6 percent. The Zarnowitz rule did not apply because there was no deep recession to be followed by a steep recovery.

Returning to Japan, in 1996–97, the Hashimoto government arguably made a serious mistake when it continued to refuse to recognize and deal with deepening problems in Japanese banks and chose instead to pursue aggressive fiscal consolidation. The Japanese recession that began in 1997 was mainly the consequence of this stupidity, the effect of which was seriously compounded by the onset of the Asian financial crisis. Fortunately, determined actions were eventually taken to restructure Japanese banks, and the much sounder banking system that subsequently emerged supported the sustained economic expansion that followed the 2001 recession.

What is the current relevance of this Japanese experience? We have seen a very deep recession, unlike the relatively mild Japanese recession of 1992–93. Correspondingly, we reasonably should expect the Zarnowitz rule to apply now even if it did not in Japan in the mid-1990s. Moreover, on this occasion, in contrast to the 1990s, Japanese banks are not suffering intense difficulties. Hence, the concern that financial-sector difficulties will forestall recovery, whatever its relevance elsewhere, is not now relevant for Japan.

Regarding the relevance of Japan's experience in the 1990s for other countries today, it is noteworthy that, in the present episode, extremely vigorous actions have been taken to stabilize the global financial system and key measures of financial stress have receded substantially. Also, in contrast to Japan in the 1990s, much has already been done to recapitalize and restructure financial systems, especially in the United States and the United Kingdom. There is little reason to believe that remaining financial-sector difficulties will present an impenetrable barrier to reasonably vigorous economic recovery. To the contrary, as in many past episodes, economic recovery will probably go a long way to help resolve remaining problems in financial systems.

Two other cases that have attracted much attention are the financial crises in Sweden and Finland in the early 1990s. In both cases, excessive credit expansions that fueled unsustainable real estate booms played key roles in creating the conditions from which the crises ensued. The recessions that followed were deep and quite prolonged, beginning early in 1990 and extending through most of 1993. This was despite constructive measures taken at a relatively early stage (in comparison with Japan's dilatory response in the 1990s) to correct problems in the financial sector. The suggestion is that these episodes point to the likelihood of a long recession and weak recovery from the present global recession that has resulted to an important degree from problems in the financial sector.

This last suggestion, however, is based on a serious misreading of the relevant economic history. The recessions in Sweden and Finland in the early 1990s were deep and prolonged because, as these economies were beginning to recover from the consequences of their domestic financial crises, they were hit with severe external economic shocks in 1991–92. For Finland, the collapse of the Soviet empire brought a sharp drop in exports. For both Sweden and Finland, the linkage of their currencies to the deutsche mark through the exchange rate mechanism (ERM) of the European Monetary System, compelled sharp increases in domestic interest rates beginning in 1991 as the Bundesbank tightened German monetary policy to combat rising inflation in the aftermath of unification. This situation was exacerbated during the ERM crisis beginning in the spring of 1992 when efforts to defend exchange rate parities led to large increases in domestic interest rates, with the Swedish Riksbank pushing the overnight bank rate to 400 percent in September 1992. Exit from the ERM, exchange rate depreciation, and substantial easing of domestic short-term interest rates brought some relief to Finland and Sweden by late 1992, but the general recession in much of Western Europe that extended well into 1993 continued to weigh down on the Scandinavian economies.

There are many examples where deep recessions have been associated with important financial crises in emerging-market economies, for instance, Mexico in 1995, Indonesia, Malaysia, South Korea, and Thailand in 1997–98, and Argentina in 2001–02. In all of these cases, recovery was quite brisk once financial stability had been restored, but financial sectors were not comprehensively restructured and restored to good health as precursors to economic recovery.

To be clear, the argument here is not that further important reforms in the financial sector are not needed to guard against both the risk of future deep and damaging financial crises and the financial excesses that often precede such crises. For this purpose, merely achieving a reasonable degree of stability in financial sectors is not nearly enough. Indeed, the clear danger is that the means of achieving this stability, by providing massive bailouts to the financial sector through explicit government assistance and through disguised assistance in the form of exceptional easing of monetary policies, have seriously increased problems of moral hazard and substantially escalated risks of future and deeper crises. Such crises, however, are likely some distance down the road—after memories of the bitter experiences of the recent crisis fade. This is reassuring in suggesting that reasonably vigorous recovery need not be preceded by further deep reforms of financial sectors. It is worrying in implying that the political impetus to undertake necessary but controversial reforms may fade before the task is accomplished.

Availability of Adequate Financing

Beyond the general concern that continuing difficulties in the financial sector and the danger of renewed crisis will undermine prospects for even a moderately vigorous recovery, there is the more specific concern about the availability of financing for the recovery. In particular, there have been complaints, especially in the United States, that large banks that have received substantial government support have not been expanding their lending. In my view, both these specific complaints and the more general concern about availability of financing have been overdone.

Last autumn, after the collapse of Lehman Brothers, key global credit markets froze and even the most creditworthy private borrowers as well as major banks could not obtain even short-term financing. The situation was very grave and the possibility of a downward spiral of credit destruction and economic collapse as occurred in the Great Depression was very real. Governments and central banks recognized the threat and acted quickly and vigorously to countervail it with massive support to financial institutions under pressure, broad guarantees of the liabilities of financial institutions, and direct lending into financial markets that had become dysfunctional. Disaster was averted, but significant economic damage was done, as reflected in the steep declines in economic activity late last year and early this year.

While massive contraction of bank credit was avoided, credit extended through financial markets in the form of asset-backed securities has suffered significant and sustained setbacks. Official efforts to rejuvenate these markets so far have been only partially successful. Hence, greater reliance on bank credit would seem to be essential to finance an economic recovery. But, for the United States, total bank credit was essentially flat from mid-2008 to 2009. Also, reports are that banks have been tightening their credit standards for existing and potential borrowers. Hence the question: Will the supply of bank credit be adequate to meet the needs of recovery?

The answer is almost surely, yes. Focusing on the United States, it is essential to recognize that the failure of bank credit to expand over the past year (through end June 2009) reflects weakness of the demand for bank credit as well as constraints on supply. The demand for bank credit is presumably linked to nominal GDP and especially to some specific components of nominal GDP. During the year from mid-2008 to mid-2009, nominal GDP fell by $354 billion or 2.4 percent, the first decline (lasting more than one quarter) in 55 years. The components of nominal GDP most closely related to credit demand showed particularly large declines. In nominal terms, residential investment was down $148 billion, inventory investment was down $126 billion, business investment in equipment and software and in nonresidential structures was down $332 billion, and exports and imports, both of which use considerable credit, were down, respectively, $409 billion and $809 billion. In addition, the volume and value of existing home sales, where the mortgage taken out by the purchaser is typically larger than the one repaid by the seller, were down substantially. Mortgage refinancing enjoyed a rebound after the government and the Federal Reserve acted to depress mortgage interest rates for conventional loans, but with house prices down and still falling, money taken out in the new mortgage was (in contrast to previous refinancing booms) typically not much greater than the old mortgage. Thus, from the demand side it is not surprising that bank credit has not been so buoyant over the past year.

Looking ahead, it is inevitable that in a moderately vigorous recovery where nominal GDP and its credit-intensive components are rising, demand for credit will rise. What about the supply? Nonbank sources of credit are likely to remain constrained. Banks should be willing and able to fill in the gap. Official measures of the capital that banks require in order to expand lending are ample, and market measures of bank capital have improved considerably in recent months. Banks also have large liquid resources ready to fund expanded lending, notably in the form of about $800 billion of excess reserves at the Federal Reserve. Banks earn interest of only one-quarter of one percent on these excess reserves. As opportunities to lend to reasonably qualified borrowers at far higher interest rates (e.g., a prime rate of 3¼ percent) expand during the recovery, banks will leap at the chance to expand their earnings at relatively low risk. This is the way that banks with legacies of bad assets typically earn their way out of trouble and into prosperity.

When one bank draws down its excess reserves to make new loans, most of these funds flow back into the reserves of the banking system (less a small fraction that drains into currency). Thus, aggregate excess reserves of $800 billion potentially support expanded bank lending of many times that figure. Of course, if bank lending expands too much too fast, the Federal Reserve will, at some point, become concerned about the inflationary consequences and will rein in the process by contracting the asset side of its balance sheet (or by encouraging banks to hold on to excess reserves by raising the interest rate paid on such reserves). But such monetary policy tightening will not occur at an early stage of the recovery. The Federal Reserve wants banks to expand their lending to support economic recovery, to fill gaps in financing created by the continuing impairment of markets for asset-backed credit instruments, and to take over some of the credit extended directly by the government and the central bank.

This does not mean that we will soon return to the heady days of the credit boom that preceded the 2008–09 recession. Some who easily obtained relatively cheap credit then will find that credit is more difficult if not impossible to obtain now, and the price of credit for those who get it will be higher (relative to the cost of funds to banks). Nevertheless, the supply of credit should be ample to support a moderately vigorous recovery. In particular, we are looking for increased lending to cover: (i) an increase in inventory investment to barely positive levels, (ii) a rise in residential investment that regains one-third of the decline since late 2005, (iii) a rise in business fixed investment that is less than half of the decline during the recession, and (iv) a rebound of sales of autos and light trucks by end 2010 to about 13 million units at an annual rate, still well below the 16+ million annual rate that characterized the years leading up to 2008.

For other countries, the story about the likely availability of adequate credit to support recovery varies somewhat from that of the United States, but the general conclusion is the same. A few small countries, such as tiny Iceland, will face prolonged processes of restoring their financial systems to reasonably good health, and economic recoveries may well suffer as a result. In contrast, for the large advanced economies of Western Europe and Japan and for most of the major emerging-market economies, banking systems are in sufficiently good shape and/or enjoy sufficient official support that adequate flows of new lending are likely to be available to meet rising demands for credit needed to sustain moderately vigorous recoveries.

Complications of Global Recovery

Another concern about the prospects for economic recovery (expressed specifically by the IMF staff in the April 2009 *World Economic Outlook*) is that recessions in other countries will make it more difficult for any individual country to stage its own recovery. The experience with recoveries from past global recessions (in the early to mid-1970s, the early 1980s, and the early 1990s) is cited as evidence supporting this concern.

Properly evaluated, however, this concern appears misplaced. It is certainly true that if one country is falling into recession, having its trading partners fall into recession at the same time tends to be mutually reinforcing to everyone's downturn. This phenomenon was seen very clearly in the simultaneous collapse of industrial production and real trade volumes in the final quarter of 2008 and the first quarter of 2009. Similarly, it seems clear that if a country is starting to recover from recession, having its trading partners fall into recession makes that country's recovery more difficult. Japan, for example, got hit with the spillover effects of the Asian crisis in late 1997 and 1998 when it might otherwise have begun to recover from its own earlier-starting recession. Sweden and Finland were hit hard by adverse external shocks as they were beginning to recover from their recessions at the start of the 1990s.

However, the issue now is: What should we expect if virtually all countries that have just suffered mutually reinforcing economic downturns begin simultaneous recoveries? Is it not reasonable to expect that recoveries that are essentially simultaneous will be mutually reinforcing to the upside, just as nearly simultaneous recessions are mutually reinforcing to the downside?

In this regard, it is essential to recognize that in earlier global business cycles, we did not have nearly simultaneous movements of recession and recovery. This is well illustrated by the global recession of the early 1990s. Growth of the US economy (which accounted for nearly half of the weight of all industrial countries) slowed to barely more than 1 percent per year during the five quarters from the spring of 1989 through summer 1990. A substantial tightening of US monetary policy during 1988 to forestall rising inflation was an important cause of this slowdown. In the autumn of 1990, after Iraq's invasion of Kuwait, with oil prices spiking and consumers cutting back in nervousness about impending war, the US economy fell into a two-quarter long recession where real GDP fell cumulatively by 1¼ percent. During this period, the Japanese economy generally continued to boom with only a slight hiccup related to events in the Middle East. The German economy generally boomed, aided by the stimulative policies pursued in connection with reunification. Some other European countries, including France, got a boost from developments in Germany.

In the spring of 1991, the US economy began to recover—albeit at a rather tepid pace by the standard of earlier business cycles. By the autumn of 1992, the tightening of European monetary policies brought on by the Bundesbank's efforts to restrain inflation and magnified by the ERM crisis pitched most of Western Europe into a significant recession. The Japanese economy, for different reasons, also fell into recession at this time. After European recovery began in late 1993, the US economy slowed again (but did not fall into recession) in the first half of 1995, under the impact of the Federal Reserve's significant tightening during 1994 and the spillover from the Tequila Crisis that hit Mexico in late 1994. Thus, the global recession of the early 1990s was not a case of everybody going down together at essentially the same time, nor correspondingly was the recovery a case of everybody recovering at essentially the same time. This is also true of the global recessions of the early to mid-1970s and the early 1980s. This time, in contrast, we are already seeing simultaneous recovery across most of the world economy.

Recurrence of Global Imbalances

Yet another concern about the durability of the present global economic recovery is that it might bring forth a recurrence of the global payments imbalances that some believe to have played an important role in laying the basis for the recent deep global recession. Some of my colleagues at the Peterson Institute are strong advocates of this view; I am not.

From 1991 through 2006, the US current account deficit widened from roughly zero to 6½ percent of US GDP, with about 40 percent of the widening occurring after 2001. In the latter period, growth of China's current account surplus, from about 2 percent of China's rapidly expanding GDP to about 11 percent, was a key counterpart to the widening of the US deficit. From 2001 to 2005, significant surpluses of other Asian countries also formed an important counterpart of the widening US deficit. Widening surpluses of oil-exporting countries (including Russia) were also an important counterpart of the US external payments deficit, especially from 2005 through mid-2008.

Some prominent economists, including Ben Bernanke, have suggested that a "global savings glut" was, to an important extent, responsible for the rising US external deficit. Moreover, it is argued that the large influx of foreign savings into the United States was the key reason why US long-term interest rates remained quite low after the Federal Reserve began to tighten US monetary policy in mid-2005. Thus, some assert that the "global savings glut" contributed importantly to the unsustainable boom in residential investment and in home prices in the United States, the unwinding of which has been a key factor in the recent global financial crisis and global recession.

While the easy availability of foreign credit played some role in the unsustainable components of the US expansion from 2002 onwards, I do not buy the excuse that foreigners, especially the Chinese, did us in. Nothing compelled US residents to borrow much of what some parts of the rest of the world wanted to lend—to be the glutton that consumed most of the global savings glut. No foreigner compelled US residents to borrow funds that they could not repay in order to invest in residential real estate on expectations that already ridiculously high prices would continue to rise. No foreigner compelled mortgage originators in the United States to make unsound loans to unworthy borrowers, and no foreigner compelled investors in the United States or elsewhere to purchase securities based on these unsound mortgages. The mirror, not the telescope, is the most important visual aid for Americans to discern who is truly responsible for the financial foolishness that contributed to our present economic difficulties.

Looking ahead, some worry that the problem of global payments imbalances might recur in the present expansion, thereby re-creating some of the difficulties that led to the 2008–09 global recession. For example, some projections of the US current account deficit show that after contracting from 6 percent of US GDP in 2006 to less than 3 percent of GDP in 2009, it will widen again above its previous peak in the years ahead. This projection is generally based on the assumption that the US economy and the economies of its major trading partners will expand in line with their potential growth paths and the US dollar will maintain a constant real effective exchange rate. Continuation of very large US fiscal deficits and rapidly rising ratios of US public debt to GDP are also part of this story. At some point, when foreigners finally tire of accumulating ever larger piles of US external debt, a crisis will ensue in which the dollar exchange rate crashes, US interest rates spike sharply upward, and the world is thrown into a global recession and financial crisis.

This, of course, is the well-known "dollar crash" scenario that has been used to scare children and grown-ups for nearly three decades—augmented by more serious and more justifiable concern about where US fiscal policy now appears headed over the longer term. Undoubtedly, if nothing serious is done to rein in US fiscal deficits over the long term, the United States will face serious economic, financial, political, and social problems, and the rest of the world will feel some adverse impact. The "dollar crash" is a possibility, but in my view the more likely course is that the domestic problems arising from persistently large fiscal deficits and rising public debt ratios will force actions to contain the deficits either before a cataclysmic crisis or after such a crisis.

These considerations, however, are not very relevant to the economic forecast through end 2010 or probably for the next few years thereafter. The US Treasury continues to be able to borrow at very attractive yields both domestically and internationally. Very large US fiscal deficits are generally accepted both by financial markets and by American public opinion as necessary and desirable in present economic circumstances. In my view, the crunch will come in a few years, if large deficits persist despite substantial economic recovery. Then, as in the late 1980s and early 1990s, public concerns about the deficit will mount, and the government will come under intense pressure to make the difficult decisions about spending restraint and revenue increases necessary to bring fiscal policy back onto a sustainable path. This process will not be pretty, and a successful outcome is not assured. If reasonable success is not eventually achieved, then crisis scenarios, including the "dollar crash," will become increasingly relevant—but not yet.

An alternative worry about global payments imbalances is that they will not recur in the present expansion as in the previous one and, as a result, the expansion will run into difficulty. Amusingly, this worry is touted by some of those who also are concerned about the "dollar crash." The worry here is that the US consumer is tapped out and will want to increase saving during the present expansion. Hence, the United States will not play the role of the net importer of last resort in the present expansion, one of absorbing the increases in net exports that other countries will wish to generate as part of their recovery strategies. The implication is that either global growth will be slower in the present expansion or other countries will need to find sources of stronger domestic demand growth, or some of both.

There is something to this argument—provided that it is not overdone. The baseline forecast envisions that US real net exports will deteriorate from 2009Q2 through year-end 2010, but less so than in some previous expansions. Accordingly, the boost to recovery in other countries coming out of the United States on this occasion is forecast to be less than on some previous occasions, especially in 1983–84.

Will demand expansion in other countries take up the slack? For China, at least so far, the answer is a resounding yes—as Nick Lardy's comments make clear. And recoveries in other Asian economies have benefited at least as much from expanding net demand coming out of China as have the United States and other industrial countries. Will this continue to be the case? I am hopeful—up to a point. From the experience of the past few years, Chinese officials should have learned both that excessive reliance on growth of net exports becomes problematic in a global recession and that policies that keep the exchange rate substantially undervalued contribute to these problems and to an undesirable build-up of huge foreign exchange reserves. Accordingly, the Chinese authorities may seek to avoid a rewidening of their current account surplus to anywhere near the scale of the previous global expansion. Continued shrinkage of the Chinese surplus (in dollar value) that would provide a continued sizeable boost to growth in the rest of the world, however, is probably too much to expect.

Concerns about external payments imbalances are also relevant for other countries. The euro area has a modest current account deficit vis-à-vis the rest of the world, but some member countries have substantial imbalances, with Germany and the Netherlands in large surplus, while France and Italy have moderate deficits and Spain and (relative to its size) Ireland have large deficits. Moreover, some of the individual imbalances seem likely to rise during recovery, with Germany's surplus growing on the back of rising exports while Italy's deficit rewidens to worrying levels. With nominal exchange rates locked-in by the common currency, it remains to be seen how economic tensions associated with growing imbalances within the euro area will be resolved during the coming expansion.

Even assuming that China continues to grow primarily driven by rising domestic demand, there remains an issue about Japan and Asia's other emerging-market countries that have relied on export-led growth. With unemployment rates in Europe and North America likely remaining quite high for some time, increasing net imports from Asia (with or without large-scale Chinese participation) are likely to raise trade tensions and provoke at least threatened protectionist responses. This will not aid global recovery, but the general economic effect will likely be sufficiently small that the Zarnowitz rule will remain predominant.

More generally, one hears the concern that with American consumers likely to want to increase their saving rates, the key driver of global economic growth will be lost and there will be a prolonged period of very sluggish global growth as no one else steps forward to drive up global demand in line with rising potential production. This fear is essentially an updated and globalized version of the "secular stagnation thesis" of the 1940s and 1950s. It was wrong then and it is wrong now. It is true that the US economy and, to a lesser extent, the rest of the world economy are feeling a temporary dampening effect on growth from the desire of US households to raise their saving rates in the face of declines in net worth. This is partly the cause of the recent recession and part of the reason to expect that the present recovery will be somewhat less buoyant than past recoveries following deep recessions. But all experience suggests that the US economy and the rest of the world economy will successfully adjust to a moderate permanent increase in the US saving rate back to levels that have characterized most of the postwar era. Fears to the contrary are fears without foundation.

Prospects for a Double Dip

The United States has endured one double-dip recession in the postwar era, when the sharp recession of 1980 was followed within a year by the prolonged recession of 1981–82. In the face of sharply rising inflation and following both a spectacular tightening of monetary policy (under the Federal Reserve's new operating procedures) and the imposition of credit controls by the Carter administration, US real GDP dropped almost 2 percent (almost 8 percent at an annual rate) during the second quarter of 1980. Monetary conditions were allowed to ease dramatically during this downturn and credit controls were relaxed. Inflation receded rapidly in the spring and early summer of 1980, and the economy was virtually flat during the summer quarter. Autumn brought on a strong recovery that lasted until the spring of 1981, and with it came a renewed upsurge of inflation. The Federal Reserve responded with (or allowed) a sharp retightening of monetary policy, with the federal funds rate rising (in weekly data) to almost 20 percent by year-end 1981. This time, the Fed kept monetary conditions tight enough for long enough to bring an enduring reduction of inflation. The cost was a recession that began in the spring of 1981 and lasted into the autumn of 1982. Thus, the United States had two recessions separated by a recovery that lasted only half a year.

What are the prospects that we might suffer another such double dip within the next year and a half or so? In my view, they are quite remote. Margins of slack in the US and most economies are large, and core inflation rates are generally very low and declining. There are vague worries about possible future inflation arising from concerns about the longer-term implications of exceptionally easy monetary policies. But most measures of inflation expectations, including spreads between normal and inflation-protected government bonds, do not reveal near-term inflation fears that might by themselves fuel an early inflation upsurge. A number of commodity prices, including oil prices, have risen substantially from their lows of late last year and early this year, but they are still well below their peaks in 2008. For most commodities, including oil, there is now sufficient excess production capacity in the world to absorb a sizable recovery in global demand.

Some would argue that with very large margins of slack in many economies, deflation is now the key concern and any worries about inflation are at least three or four years off. I am not in this camp. Empirical research suggests that margins of slack are of some value in explaining and predicting movements in inflation rates, but the relationship is not tight. It would be dangerous to assume that so long as the unemployment rate remains well above its pre-recession level, the risk of inflation is necessarily minimal.

Central banks will not make this mistake. They will monitor developments carefully for evidence that general inflationary pressures are picking up and will react to such evidence if it emerges. Indeed, as the recovery proceeds through next year and into 2011 and beyond, monetary authorities will want to firm up their policies to more neutral stances somewhat in advance of clear evidence of serious increases in inflationary pressures. However, competent monetary authorities will undertake such forward-looking policy tightening with due regard to the desirability of keeping economic expansions moving forward. They will not tighten suddenly and sufficiently to raise substantially the risk of a new recession unless there is clear evidence of a meaningful escalation of inflationary pressures, as reflected in increases in core measures of consumer prices and wages. With core inflation rates now falling and likely to fall further at least into next year, it is virtually impossible to foresee sharp tightenings of monetary policies that would induce new recessions within the next year or two.

Moreover, the only way that renewed recession is plausible at a relatively early date resulting from monetary tightening is if the recovery before then proves to be very robust—somewhat above my baseline forecast. Thus, the story of some pessimists that the recovery will be anemic at best through 2010 and then we will face serious risk of a double dip recession makes little sense.

Fiscal authorities in many countries will also face the need to reduce budget deficits. Overly aggressive actions in tightening fiscal policies, however, are probably even less of a risk over the next couple of years than overly aggressive monetary tightening.

Of course, paths of economic recovery will not be completely smooth. At some time in the future, very likely within a decade, there will be further recessions, possibly global in scope. Policy errors may well play a role in future recessions, as they have in the past. For example, if monetary authorities tighten their policies at a pace that seems adequate to contain inflationary risks but turns out to be too slow, it is conceivable that inflationary pressures could be escalating by 2012–13. Policy reactions might then, with a brief lag, push economies into renewed recession before they fully recovered from the deep recessions of 2008–09. At this stage, however, there is no strong reason to forecast that renewed recession before 2014 is much more likely than indicated by the usual frequency of postwar business cycles, namely, a recession occurring on average about every 5 or 6 years. More specifically, it is extremely hard to justify a forecast of greater than 50 percent likelihood of renewed recession within two years.

The Proof of the Pudding

A few months ago, one heard many dire predictions of recessions lasting through 2010 and into 2011 and even of the possibility of another depression. Such talk has receded as evidence has accumulated of a bottoming out of most recessions and, at least in some countries, the beginnings of economic upturns. Now the nabobs of negativism speak darkly of an extended period of very sluggish recovery and the risks of a "double dip" in which recession would return sometime next year or perhaps early in 2011.

In contrast, the view here is that the United States and the rest of the world have embarked on recoveries that will gather strength in the second half of this year and proceed moderately vigorously through next year and into 2011. These recoveries may not be quite as strong as earlier postwar recoveries following deep recessions, but they will surpass almost all present forecasts on the upside and will once again illustrate the Zarnowitz rule: Deep recessions tend to be followed by steep recoveries.

Ultimately, economic performance over the next 16 months will reveal whether this "conservatively optimistic" view is correct.

Appendix
Forecasts of the Reagan Recovery

The combined recessions of 1980 and 1981–82 produced what may be regarded as the deepest US economic downturn of the postwar era, prior to the recession of 2008–09. The rise of the unemployment rate by 5 percentage points (from a low of 5.7 percent in the spring of 1979 before the 1980 recession to 10.7 percent in November 1982) is only slightly smaller than the 5.3 percentage point rise so far recorded for the recent recession (from a pre-recession low of 4.4 percent in 2007 to an August 2009 reading of 9.7 percent). The extent of economic slack that existed at the end of 1982, about 7 percent of GDP by my estimate, is about the same as the extent of economic slack that I estimate existed in 2009Q2.

The most important cause of the 1980–82 downturn was the need for US economic policy to drive down inflation and inflationary expectations on a sustained basis. In contrast, the unwinding of excesses in the housing and financial sectors (that were no more than partly due to unwisely easy economic policies) were the most important underlying causes of the recent US recession.

Despite this difference in underlying causes, both downturns had important common features that are relevant in considering potential similarities in their patterns of recovery. In both cases, the recessions involved large declines in real residential investment, which began well before general declines in economic activity: From the summer of 1978 to the summer of 1982, real residential investment fell 45 percent; from the end of 2005 through 2009Q2, it has fallen 56 percent. In both cases, real business investment in equipment and software fell proportionately much less than residential investment and moved more contemporaneously with the rest of real GDP: It fell 9.1 percent from 1979Q3 to 1983Q1 and 22 percent from 2007Q4 to 2009Q2. In both cases, real investment in nonresidential structures did not start declining until well into the general recession, and meaningful recovery in this sector lagged the rest of the economy in the general recovery from the 1980–82 downturn. In both cases, inventory investment made large negative contributions to real GDP growth at the end of the recessions: Inventory investment subtracted 1.5 percent from real GDP in 1982Q4 and 1.2 percent from real GDP in 2009Q2.

Also, it is relevant to recall that in late 1982 the US financial system was still under great stress, although the extent of the problems was concealed by the accounting principles applied at the time. With inflation and inflationary expectations both substantially reduced, and with the economy in recession and the financial system under stress (including the deepening crisis with third world debt), the Federal Reserve began to ease monetary policy in the summer of 1982. With the Reagan tax cuts enacted in 1981 and the beginnings of the defense build-up, fiscal policy also strongly supported recovery. In these respects, the situation at the beginning of the Reagan recovery was similar to that today.

Initial estimates of real GDP growth in 1982Q4 were slightly negative, and subsequent revisions have fluctuated between slightly negative and slightly positive. The National Bureau of Economic Research dates the trough of the cycle as November 1982. By the first quarter of 1983, economic recovery was underway, although its vigor remained in doubt.

In the current cycle, employment continued to decline through August and the unemployment rate jumped to 9.7 percent from 9.4 percent in July. Other data, however, indicate that general economic activity in the United States bottomed around mid-year. Accordingly, it is interesting to compare what forecasters are now saying about prospects for recovery with what was being said in late 1982 and early 1983 about the prospects for recovery from the combined 1980–82 recession.

The Reagan administration published its forecast in the *Economic Report of the President*, dated February 1983, but the effective date of this forecast is sometime in December 1982. The staff of the Board of Governors of the Federal Reserve System regularly produces forecasts for use by the Federal Open Market Committee (FOMC) in its formulation of monetary policy. These forecasts, which are presented in the Green Book, are now available on the Fed's website. While it has sometimes been suggested that the Reagan administration's forecasts were tainted with undue optimism, the Fed staff forecast (which was not published) presumably had no such bias and was generally in line with the consensus of private forecasts.

Table A1 reports relevant figures from the Reagan administration forecast and from the series of forecasts of the Fed staff from late 1982 through spring 1983. These forecasts are compared with the actual outcomes, as reported through end 1984. Later revised data are not used because of changes in the measurement of real GDP that could not reasonably have been anticipated when the reported forecasts were made.

Table A1 Alternative forecast for the US economy as of late 1982 and early 1983 (percent)

	Reagan administration, December 1982	**Federal Reserve staff**				**Actual outcome**
		December 1982	**February 1983**	**March 1983**	**May 1983**	
Real GDP growth						
1983 Q4 to Q4	3.1	3.1	3.5	4.1	4.6	6.3
1983 year over year	1.4	1.4	1.8	2.5	2.7	3.7
1984 Q4 to Q4	—	—	4.4	4.6	4.7	5.8
1984 year over year	3.9	—	4.1	4.4	4.8	6.8
Unemployment rate						
1983Q4	10.4	10.8	10.6	10.2	9.7	8.4
1983 year average	10.7	11.0	10.8	10.3	10.0	9.6
1984Q4	—	—	9.5	9.1	8.9	7.2
1984 year average	9.9	—	10.0	9.5	9.2	7.5

Clearly, forecasts for the Reagan recovery fell well short of the facts. In late 1982 and early 1983, real GDP growth was anticipated to be positive but barely sufficient to produce even modest declines in the unemployment rate through 1983 and well into 1984. In fact, the economy surged, and the unemployment rate dropped by 3.5 percentage points by the end of 1984.

Will the same story be repeated this time? As I have already said, qualitatively I anticipate that growth over the next year and a half or so will significantly exceed most forecasts and that the unemployment rate will come down a far bit more than generally anticipated. The results, however, will probably not be quite as spectacular as in the Reagan recovery.