

Japan and the World at the Beginning of the Twenty-First Century

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In 2007, we celebrate both the tenth anniversary of the Asian financial crisis and the Kyoto protocol. Much has happened in the world since, enabling us to look back at these problems with new perspectives and to look forward to some of the challenges facing the world today with new understandings. In this essay, I want to take up these two themes.

The Lessons of the East Asia Crisis

For 30 years prior to the financial crisis of 1997, the countries of East Asia had grown at an unprecedented rate. They had followed economic strategies that differed markedly from those that the World Bank and the IMF had advocated, the so-called Washington Consensus, which contended that the best way to growth lay in minimizing the role of government, privatizing whenever possible, stripping away government regulations, and weakening social safety nets. Yet, not only did these countries have higher growth, the benefits of that growth were more widely shared, and growth had been more stable than in those countries that had followed the Washington Consensus prescriptions. East Asia had shown that development was possible; indeed, what had been accomplished was beyond anyone's dreams and expectations. Only a few decades earlier, Nobel Prize winner Gunnar Myrdal had concluded in his classic book *The Asian Drama* that the continent's prospects were bleak. Japan, followed by the Four Tigers, then by the countries of Southeast Asia, had shown how wrong that assessment was. But the 1997 crisis suddenly threw all that into doubt.

As the crisis worsened, one could almost see the glee in the eyes of the market fundamentalists (those who believe that unfettered markets are the best way for a country to grow), including those who had advocated the Washington consensus policies. It was as if their views had been vindicated by failures that were (they claimed) the consequence of flawed economic policies. East Asia's seeming success was but a mirage. To be sure, in the view of these critics, capital, not understanding the deep-seated problems, had rushed in to the region, and that had buoyed growth during the preceding years. But the consequences of crony capitalism and lack of transparency were inevitable: it was just a matter of time before the roof fell in.

In retrospect, we can see how flawed these assessments were. The countries recovered quickly; growth was restored, if not to the exceptional levels of 6%-8%, at least to a healthy 5% or more. China, the behemoth of the region, continued to grow at its historically unprecedented rates. Inequality there did increase, in contrast to most of East Asia, where standard measures of inequality (such as the Gini coefficient) remained low even as incomes rose, refuting Kuznets' Law (named after the American Nobel Prize-winning economist Simon Kuznets), which claims that the initial stages of development inevitably boost inequality. But even as inequality in China increased, hundreds of millions of people were lifted out of poverty.

The contrast to what happened in Latin America, the continent that followed the dictates of the Washington consensus most assiduously, is also revealing. Not long after the East Asia crisis, the countries in Latin America faced a wave of crises. While those in Argentina and Brazil received the most attention, recessions and downturns in Ecuador, Bolivia, and other Latin American countries had equally harsh consequences for the citizens of those countries. Latin America had gone through a decade of stagnation in the 1980's – what was called “the lost decade.” Now Latin America entered another era of stagnation, which the Economic Commission for Latin America referred to as “the lost half-decade.” The IMF's star student, Argentina, had the crisis of the century, as it let its currency, which had been pegged to the dollar, devalue to less than one third of its pre-crisis level. Unemployment soared to more than 20. Its \$160 billion default on its foreign debts was, by some accounts, the largest ever.

Latin America eventually recovered, too, but its recovery rested on quite different foundations than that of East Asia. Argentina recovered mostly because it stopped following the IMF's dictates, put its crushing debt behind it, and allowed its exchange rate to fall. Four years of 8% growth followed. The ultimate irony was that with the IMF gone, Argentina was even able to restore fiscal discipline – a goal that the IMF had unsuccessfully strived to achieve. (Once again, the IMF's predictions that without an IMF program Argentina would face disaster, even a resurgence of hyperinflation, proved to be entirely unfounded.) But the underlying force for the continent was the resurgence of global growth at levels – roughly 5% – that had not been seen for decades. Still, it was not robust growth in the United States or Europe that fueled this new era of global prosperity; instead, it was growth in Asia, particularly in China (whose growth exceeded 10% in some years) and India (whose growth soared in 2006 to 9%) that drove the world economy ahead. This growth required huge amounts of resources, and Latin America – much of which remained a commodity-based economy --reaped some of the benefits.

Lack of transparency was not the cause of the crisis

Had East Asia been plagued with the kinds of deep structural problems that the IMF and the US Treasury alleged, its recovery would have been slow. One can fix budgets relatively quickly – just slash expenditures or raise taxes. After all, the Bush administration itself has shown how quickly fiscal positions can change, when it simultaneously increased expenditures and lowered taxes, turning a 2%-of-GDP fiscal surplus in 2000 into an almost 5%-of-GDP fiscal deficit within a couple of years. But fixing structural problems takes time. East Asia's rapid recovery is evidence that something else was responsible.

This does not mean that East Asia's economies were perfect; they had problems, which many of them continue to address. But solving the problems on which the IMF focused was only part of what was needed. There was also a need to pay more attention to inequality and the challenges of innovation.

The IMF and the US Treasury also argued that a lack of transparency was among the root causes. At the time, I was Chief Economist of the World Bank, and I patiently tried to

explain why this contention was questionable at best. After all, the last set of financial crises had been in Scandinavia, the countries that have long had the most open and transparent institutions. Evidently, transparency did not inoculate one against crisis. Likewise, there were dozens of countries far less transparent than the East Asian countries, and these were not (at least at that time) having crises. Transparency was neither necessary nor sufficient for having a crisis. Moreover, there had already been clear moves within the region to increase transparency. If lack of transparency causes crises, the crises should have happened earlier.

Subsequently, I conducted a detailed econometric study with a colleague of mine from the World Bank, Jason Furman, on whether the East Asian countries, by virtue of their lack of transparency, macroeconomic policies, or any other factor, were more “vulnerable” to a crisis than other countries. Had they brought the problem on themselves? The answer (except in one respect described below) was a resounding no: indeed, on the basis of their behavior, they should have been far less vulnerable than many other countries, far less likely to have had a crisis.

As I argued in my book *Globalization and its Discontents*, the IMF and the US Treasury used transparency to shift blame away from the international banks that had poured their own money into the region and had advised their clients to do likewise. They did not want to admit that these banks (or Western credit rating agencies) had not done their homework, and had not exercised due diligence. It was far easier to complain of having been deceived by the lack of transparency.

But there was an even more fundamental reason for attempting to shift blame: the policies that the US Treasury and the IMF pushed (and continue to push), especially the policy of unfettered and premature capital market liberalization, emerged as the root cause of the crisis. Liberalization had led to a flood of money pouring in; but the money that rushed in also rushed out, leaving havoc behind it.

Even before the East Asia crisis, studies at the World Bank had demonstrated the risks posed by liberalization. What happened in Latin America should have removed any doubts left by the East Asia crisis. In Latin America, much of the money had gone to sustain a consumption boom. The debt was not used to finance investments that could enhance the capacity of the economy—including the capacity to repay the money borrowed. In the turmoil that followed from the attempt to pull money out of the countries, it was not just those who had lent or borrowed imprudently that suffered; indeed, many of the foreign banks that lent money were at least partially protected by IMF bail-outs, which facilitated the withdrawal of their dollars and euros. But the IMF’s contractionary fiscal and monetary policies, which entailed budget cutting and high interest rates, had the predictable effect of turning downturns into recessions and depressions, accompanied by massive unemployment and bankruptcy.

I was astonished when the IMF called for capital market liberalization at its Hong Kong meeting in September 1997, for it was clear that a regional crisis was brewing. Thailand’s crisis had begun on July 2, and capital market liberalization in the region would only

make things worse. At the meeting, I conferred with most of the region's finance ministers and plotted a response. If any country alone were to restrict capital flows, they would be berated by the IMF, and possibly by the market; but if they could all do it together, they could protect themselves from the verbal and market onslaught. They were to go back to their capitals, to think through the strategy, and we were to meet again later in the fall. But before we could meet again, what we had anticipated occurred: not long after the delegates returned from the Hong Kong meeting, the crisis spread to Indonesia.

What had also astonished me about the advocacy of capital market liberalization by the IMF and the US Treasury was that there was no evidence that it promoted economic growth; on the contrary, there was evidence that it resulted in more instability. Of course, those in financial markets (who play such a large role in shaping the policies of the IMF and the US Treasury) make money from volatility. They made money when money rushed in; but they made even more money (so evident in the aftermath of South Korea's crisis) buying assets at fire-sale prices. The IMF encouraged these countries to sell their assets at these low prices, saying that they needed foreign expertise, even though they had had unprecedented growth for more than a quarter-century without such expertise. For financial speculators, there was an almost assured profit: just by waiting until the recovery (which happened quickly), they could resell the assets and make hundreds of millions of dollars. In the case of one Korean bank, the profits exceeded a billion dollars; and in the rush to "help" Korea, the IMF evidently forgot to advise Korea about tax avoidance, so the American investors took advantage of a loophole to avoid paying capital gains taxes on their mega- windfall gains.

Too late for the countries wracked by the instability that capital market liberalization had brought on, the IMF decided to do a study of the benefits and costs of that policy. The results, published in 2003, were remarkable for their honesty. The study reached the only possible conclusion: capital market liberalization often did not promote growth among less developed countries, and often was accompanied by an increase in volatility. The IMF seemed astonished, for, according to its theories, capital market liberalization *had* to reduce volatility. But to anyone who had looked at the data – which is what the IMF is supposed to do – it was long obvious that capital flows are pro-cyclical, that is, they flow into a country when things are good, and out during economic downturns. In short, capital flows exacerbate economic fluctuations. Bankers do not like to lend to people in need, and when they see a problem brewing, they demand their money back. What happened was perfectly consistent with modern economic theory, which over the past quarter-century has emphasized imperfect information and market imperfections. But it was not consistent with the perfect markets models (assuming perfect information, perfect competition, and perfect insurance) used by the IMF. Given their flawed models, it is no wonder that the IMF's predictions turned out to be so wrong, and that its prescriptions were so counterproductive.

In 2006, the IMF returned to the theme of capital market liberalization. Still puzzled by the empirical results of their own study, the Fund's economists suggested that capital market liberalization was still good, but that its effects were manifested in ways that were hard to detect. The IMF suggested that the benefits occurred *indirectly*, e.g., through

effects on governance. But these last-ditch attempts to defend an indefensible position were equally unpersuasive. It was still the case that the two huge countries that had had the most successful growth in recent years – India and China, accounting for 2.4 billion people – had not liberalized their capital markets. These were also the countries that avoided the global financial crisis. Their successes were no accident.

The Rise of China

No story has intrigued economists more than China's economic rise. With a growth rate of 10%, incomes are doubling every seven years. In 30 years, China has become an economic power – it will soon emerge as the second largest trading economy (if it has not done so already), and the largest contributor to greenhouse gases. It has done so by becoming a market economy – but not by following all the rules of market fundamentalists, and especially not by following the prescriptions of the Washington Consensus. According to the theories underlying those prescriptions, China *could not* have succeeded. After all, its transition to a market began not by privatizing land, but with a system of “individual responsibility.” This provided strong incentives to farmers – they could keep the fruit of their labor – but they did not *own* the land on which they worked.

The next major social innovation was the Township and Village Enterprises (TVE's), created by local communities, often with ambiguous property rights. Again, according to the Washington consensus theories, the TVE's were doomed to failure; in fact, they provided the foundations of China's growth through much of the eighties and into the nineties. They worked partly because they provided a form of governance: those in the local communities had a strong incentive to make sure that the enterprises were successful and created new job opportunities.

Only after these foundations to its economy were created did China really open itself up to foreign investors (in joint ventures), and even then it did not fully liberalize its capital markets. China's leaders had seen what opening up markets to speculative and volatile capital can do to an economy: one cannot create jobs with money that can enter and exit a country overnight. On the contrary, all that money sloshing around can cause major problems.

A year ago, China began a transition to a new economic model. Though previous strategies had produced wonders, China's leaders realized that the country was entering a new stage of development, which would require new approaches. While earlier growth had reduced poverty, it had also led to growing disparities between Western regions and coastal provinces. Officials had earlier tried to remedy this by investing heavily in infrastructure in the more backward Western parts of the country, reducing their geographical disadvantages. Today, when one visits these areas, one can see the benefits: growth has been strong, though still not as strong as in the coastal regions.

But even more important was the growing gap between rural and urban living standards. In the rush to development, social services in rural areas had often even been reduced,

with predictable results. For example, increases in life expectancy slowed, and Kerala, a part of India where life expectancy in the late 1970's was comparable to that of China, had pulled ahead significantly by the beginning of the millennium. China, accordingly, put new emphasis on "social harmony," and, in particular, on closing the rural/urban divide. Its aggressive efforts included the elimination of rural school fees and taxes.

Given China's poverty, it was natural that it first focused on increasing incomes. But rapid growth took an enormous toll on the environment, threatening health – and even the sustainability of growth. China now realized that paying attention to the environment was not just a luxury to be postponed to sometime in the future when the country was richer, but a necessity that would require changing patterns of consumption and production. A new State Council Committee was formed to promote the service sector. While environmental regulations were essential, China also realized that incentives had to be provided to the market (something that even US President George W. Bush has not seemed to understand.) While some of the new regulations – such as those discouraging the use of disposable wooden chop sticks – were partly symbolic, they nonetheless sent a strong message concerning the environment. And increases in gasoline and oil prices provided market incentives. The government set strong goals for increases in energy efficiency: 20% in five years. And while China's macroeconomic performance exceeded most of the government's goals, this was the one clear failure to which the premier called attention in his year-end review.

A third change in economic strategy entailed a heightened emphasis on "independent" innovation. China's success, like that of the other East Asian countries, was based in large measure on closing the knowledge gap with the advanced industrial countries. Most of the East Asian countries had excelled in imitating technologies, but Japan had then moved on to the next stage: creating new technologies. In a host of consumer goods, Japan stands at the forefront. China aspired to follow Japan's lead, which would necessarily require the government to continue to pursue active industrial policies designed to increase productivity in various economic sectors, even though such policies bucked the Washington Consensus. It would also require the government to create new research institutions, and most importantly to strengthen its universities, a task to which the government has turned with enthusiasm and vigor.

There is another reason – one that applies to many other countries as well – that China needs an independent innovation system: Western innovation was focused on saving labor, not on saving resources. But in China, there is an abundance of labor – indeed, one of the key problems is finding jobs for everyone. But there is a scarcity of resources. The fact that environmental resources are often not appropriately priced means that the market is not providing the right signals, or incentives.

I have argued, in addition, that China needs to develop the right intellectual property (IP) regime. The US has been encouraging China to imitate it in this regard, little noting the great dissatisfaction with the IP regime at home. Recent Supreme Court rulings have made clear that even that august body has become convinced that America's IP regime may be retarding innovation. The most important input into research is new ideas; and by

making access to new ideas more difficult, an unbalanced IP regime can impede the progress of science and technology. For example, the thicket of patents means that any new successful software program will be plagued with lawsuits claiming infringement.

The fourth major change in China's development strategy – its “new economic model” – is a move away from export-led growth, which had served China well, just as it had once served Japan and the other East Asian economies well. But, just as Western markets had reacted to Japan's success in the 1980's with trade barriers (even President Reagan was quick to put aside his free-market ideology when it came to protecting his campaign contributors and American jobs), so, too, have they reacted to China's success.

Moreover, there is something curious about China's export-led growth: it has been, in effect, financing its own exports, as it lends hundreds of billions of dollars to the US. It makes far more sense for China to use that money to help expand its own consumption rather than to finance higher consumption in the richest country of the world.

Exports played an important role in China's previous success, partly because they required China to adopt high standards and new technologies. But China is no longer so dependent on exports in this regard, and it will be even less so once its independent innovation system is more developed. Moreover, many of its exports are highly energy-intensive, so moving away from them would be good for the environment.

China's emergence has already had an enormous effect on the global economy and global geopolitics, and this impact is likely to grow further as it competes with other countries for the world's scarce resources, driving up prices. In Africa, for instance, China's lending for infrastructure now exceeds that of the African Development Bank and the World Bank combined. While development economists had always hoped to see the kinds of growth now being experienced in China (and India), perhaps they never thought it would really occur, which may explain why no one calculated the accompanying huge increase in demand for the world's limited natural resources. Without large changes in either consumption patterns or resource efficiency, the world simply cannot sustain global living standards comparable to those in the US, Japan, and Europe. Emissions of greenhouse gases alone would result in unacceptably high risks of climate change (including global warming). A new economic model – involving changes both in resource use efficiency and consumption patterns – is clearly needed.

Resource-producing countries have benefited from China's growth. But other countries regard its success as a mixed blessing, while some view it as a real threat. With the end of the Multi-fiber Agreement in 2004, which set export quotas for each country, countries like Bangladesh no longer had, in effect, a safe market. They were given a short reprieve, as the US and Europe, claiming that the ten years of transition to the quota-free system foreseen by the Uruguay Round trade agreement was insufficient, maintained restrictions on Chinese imports for another few years. But with the expiration of these quotas now looming, these countries worry that they will lose their markets to China, or be forced to lower wages.

Japan and Korea are among the countries that stand to gain the most from China's emergence, if they can restructure their production appropriately. With China standing at their back door, they can access it for labor-intensive production, and even for some of the more routine aspects of research, leveraging their technical know-how and design capabilities. It will not be easy, and it will require Japan to invest more heavily (and more efficiently) in education and technology.

Global Imbalances

One of the things for which China should *not* be blamed are the large and growing global financial imbalances, the underlying source of which is America's huge trade deficit, which stood at \$850 billion in 2006. Even if the elimination of China's multilateral trade surplus of \$150 billion translated dollar for dollar into a reduction in the US deficit, it would still be \$700 billion; but the more likely outcome of an appreciation of the Chinese yuan is that America's trade deficit would remain little changed: America would simply buy textiles and apparel from Cambodia and Bangladesh, rather than China. But while China has been willing to finance the US trade deficit, these other countries are more likely to want to spend any extra money they get at home, and if they put money into reserves, more of it will go be in euros, which have a greater prospect of increasing in value.

Nevertheless, just as the US wrongly blamed Japan for the global imbalances of the 1980's, now it is wrongly blaming China. In fact, there are two factors underlying the problem: the low level of savings in the US relative to investment, and the global reserve system. It will be difficult to correct each of these problems.

The low level of national savings in the US is a result of low household savings – actually negative for the last two years – and a large fiscal deficit. The problem is that any significant increase in savings will have a depressing effect on the US economy; and, given America's role in the global economy, such adjustments would have a depressing effect worldwide.

The fact that so many countries have been willing to hold US dollars in reserves has made it much easier for the US to finance its large fiscal deficits. But as the dollar is increasingly viewed as a weak and volatile currency, it has become less effective as a store of value. As countries move reserves out of the dollar and into other stores of value, the dollar weakens, and there is a vicious cycle, in which other countries become innocent victims. A weak dollar/strong euro has been particularly hard on Europe, making its exports less competitive.

It has long been recognized that this is a fundamental problem with any single-country reserve system: as more of that country's debt piles up in reserves, confidence in the country erodes. Exporting T-bills instead of automobiles does not create jobs. The large trade deficit either leads to low aggregate demand (except in unusual circumstances, like America's investment boom of the 1990's), or the government must offset low demand with high fiscal deficits.

In *Making Globalization Work*, I explain that what is needed is a new global reserve currency, and I show how such a system can work, increasing equity, promoting growth, and enhancing global stability. But getting such a system adopted may not be easy; and the transition to such a system may not be smooth.

In short, there is every reason to believe that global imbalances will continue to be a threat to global stability. These imbalances will eventually be “corrected,” but the process is likely to be disorderly, and policymakers in both developed and less developed countries will be confronted with challenges in maintaining macroeconomic stability in the process.

The Recovery of the Japanese Economy and its Restructuring

The Japanese economic miracle seemed to come to an end in the late 1980's. While there is some debate about what happened, in retrospect it seems clear that it was another example of the consequences of misguided financial market liberalization, which led to a boom; and, like every boom, the bubble eventually broke, devastating banks and the financial system more generally.

A series of policy mistakes made the recovery excessively slow. For example, when America's Savings and Loan industry collapsed, the US government stepped in with a massive bailout, under the first President Bush. Free-market ideology, which insists that government should not interfere in the economy, and that bailouts give rise to a moral hazard problem, undermining incentives for prudent lending, was quickly set aside. The cost to the public was large (originally, the estimates were as high as \$500 billion, but in the end the costs were probably a quarter of that amount). But the cost to the public – in terms of a weak economy – of not bailing out the S&L's would have been even larger.

In the struggle to recover, Japan taught the world several lessons. The increase in taxes in 1997, just as the economy was beginning a faltering recovery, led to a major setback. Increases in expenditure sometimes did not seem to have the stimulative effects that had been expected, contradicting standard Keynesian economics. Evidently, consumers became more apprehensive about the economy and more cautious in their spending, perhaps worried about the inevitability of tax increases in the future. In such circumstances, governments can use temporary reductions in sales taxes to encourage individuals to increase their consumption today (at the expense of consumption in the future), or temporary investment tax credits to encourage firms to invest today.

Causes of recovery

Fortunately, the Japanese economy has now recovered. Many factors have contributed to the rebound, including the growth of trade with China and the restoration of banks' balance sheets. The Koizumi government got much of the credit; governments always claim credit for what goes well, and argue that what does not go well is beyond their

control. In fact, it is often just the opposite. In this case, I suspect that the major factors contributing to Japan's recovery had little to do with Koizumi's economic program. Certainly, the privatization of the postal savings bank, which was often put at the center of his economic agenda, had little to do with it, partly because even if it eventually yields the benefits for the economy that he claimed, the privatization is still years off. Japan's economy (like every economy) needs reforms, and there may be important political benefits to privatization of the postal savings bank. But this was surely not the most needed reform, the one that would bring the most long-term benefits.

Restructuring

In many respects, Japan is a dual economy. A highly efficient manufacturing sector – indeed, among the most efficient in the world (reflected in Toyota's overtaking General Motors as the largest automobile manufacturer in the world) – exists alongside other sectors that are much less efficient and dynamic. Policy needs to be directed at increasing the efficiency of these other sectors. Stronger competition laws would help; so, too, would the elimination of many of the regulations designed to protect vested interests. Japan's success during the period of its economic miracle was based on industrial policies designed to encourage the transfer and development of technology in manufacturing. These policies worked. Perhaps what is required is a similar set of “industrial” policies, but now directed at the service sector rather than industry.

The importance of avoiding monetary tightening

As this book goes to press, Japan's growth is strong (and in comparing Japan's growth with that of the US, one needs to take into account the large differences in labor force growth rates). But it is not yet on firm ground, and global conditions remain fragile. A key issue is whether it is time to increase interest rates. I think Japan's central bank should proceed with great caution. There is no threat of inflation. Indeed, there is a debate about whether deflation – which can be even worse for an economy than moderate inflation – has been overcome. Different indices give different results. Policy is always conducted in the context of uncertainty; and as a result, good risk analysis is as essential here as it is in making investments. The evidence today is that inflation at the low levels that are likely to emerge has no significant adverse effect on growth, and that the cost of disinflation – reducing the inflation rate if it should rise too high – is low. Hence, the risk of maintaining the low interest rate policy is manageable, and the benefit is high.

Avoid inflation targeting

In some quarters, there are calls for Japan to join the most recent fad among central bankers: inflation targeting. Central banking is like religion: there are certain beliefs that most central bankers hold fervently, they espouse these beliefs with conviction, and there is even standardization in the lines of argument. But there is also often little scientific evidence behind these beliefs. As a result, the pronouncements often turn out to be wrong, and the policies often do not have the predicted or desired effects.

In the 1980's, under the influence of Milton Friedman, central bankers around the world adopted monetarism, the belief that all central banks have to do is control the money supply. Rigid control of the money supply would lead to low and stable rates of inflation, which in turn would ensure rapid and stable growth. To repeat, there was no theory, and only limited empirical evidence, to support monetarism. In fact, monetarism did not work, and in some respects it was a disaster; today, virtually all central banks have abandoned this article of faith. (As a vestige of this discarded religion, the European Central Bank still looks at monetary aggregates.)

Blind faith in monetarism accounted for many of the economic woes that America, and the world, experienced in the 1980's. Focusing on controlling the money supply led to high interest rates – at unprecedented levels. Banks that had borrowed short term and lent long term – especially the Savings and Loan Associations, which provided mortgages to millions of Americans – became, in effect, bankrupt overnight. President Reagan postponed the disaster by deregulation – allowing them to undertake high risk, high return loans – and some accounting tricks. But this simply meant that when the day of reckoning came, as it had to, the cost to taxpayers was even larger. The almost inevitable tightening of lending standards that followed the bailout then contributed to the recession and downturn of 1991-1993.

America was wealthy enough to weather these storms with relative ease (though the recession of the early 1980's was the worst since the Great Depression, despite massive government deficits). But the effect of monetarism on the developing world was devastating. High interest rates suddenly meant that the debts Latin America had accumulated to manage its way through the oil price shocks of the 1970's became unbearable. Country after country defaulted, and the region fell into a decade of stagnation – what has since been called the “lost decade.”

Central bankers always look for simple rules, and today's simple rule is “inflation targeting”: choose an inflation rate, lower interest rates when inflation is below that target, and increase rates when inflation exceeds it. Never mind the source of the shock to the economy that gave rise to the change in the inflation rate, or what is happening to unemployment or the exchange rate. The contention is that committing oneself to an inflation rate generates “credibility,” and that credibility itself enables the economy to respond more effectively to shocks. When the price of oil increases, inflation does not rise (as it did in the 1970's), because market participants know that central banks will act quickly to stamp it out. Knowing that inflation will not increase in the future means that prices will remain stable today.

There is, of course, another explanation for why inflation has remained so low throughout much of the world: globalization in general, and China in particular. The supply of low-price goods from abroad has kept prices at home in check. Tradable goods are a good substitute for many non-tradables. Globalization has put downward pressure on wages in manufacturing (and other tradable sectors), and this has put downward pressure on wages throughout the economy; and so long as there is enough competition in the market, this translates into stable prices everywhere.

Inflation targeting is, at least in the short run, a less dangerous religion than monetarism. It typically does not lead to extremes of behavior such as the very high interest rates in the US in the early 1980's. But, over the long run, it can lead to a weakened economy, as Europe has demonstrated. Europe has had a higher interest rate than it would have had if it had paid more attention to the high level of unemployment. The high interest rate has not only discouraged investment, but has also contributed to appreciation in the exchange rate, which has dampened the European economy.

For Japan, inflation targeting has been suggested as a way of fighting deflation. Deflation is a problem partly because it means real interest rates (taking account of the deflation) are positive, even if nominal interest rates are zero. If market participants know that the government will keep interest rates low as long as deflation persists, they may become convinced that long-term real interest rates will eventually fall, encouraging them to consume or invest more today. The problem with inflation targeting for Japan is that it focuses on the wrong variables in the short run, and, if the commitment to inflation targeting is credible, it commits the monetary authority to a flawed strategy over the long run.

Monetary policy affects the economy not so much through real interest rates (upon which inflation targeting focuses), but through credit availability. The extent to which the monetary authorities are stimulating the economy is better measured by the expansion in the supply of credit than by the level of real interest rates today (or even the long-term real interest rates). There are many ways by which monetary authorities can affect the level of credit availability, and these should be the focus of monetary policy. Moreover, even if the monetary authority wishes to affect long-term real interest rates, there are better ways of doing this than through a commitment to inflation targeting (the effects of which are, at best, uncertain.) For example, by changing the relative supply of short-term and long-term government bonds, monetary policy can affect the relative prices of these assets, thereby affecting the long-term interest rate.

Meeting the Challenges of Globalization: Alternative Forms of the Market Economy

The euphoria over globalization is by now gone, both in the developed and the developing world. Economic theory had predicted that there would be losers: since the movement of goods and services through trade is a substitute for the movement of people and capital, the wages of unskilled workers in advanced industrial countries would be reduced. Globalization has been oversold, and the problems to which it gives rise have not received the attention they deserved. The surprise is not that unskilled workers have been doing poorly; it is that the adverse effects that economic theory predicted seem not to have appeared as fast and as thoroughly as economic theory would have predicted. But realities have a cruel way of intruding even on the most forceful rhetoric. A rising tide has not lifted all boats; and the rising rip tide of globalization will, unless it is changed in some ways, dash some of the smaller boats.

According to economic theory, the winners of globalization *could* compensate the losers (though even this is true only under certain conditions), but economic theory never said that they would. And they haven't. Globalization is not the only force contributing to the growing inequalities in most countries around the world, but it is the one that individuals think that they can do something about.

Some have called for patience: *eventually* everyone will be better off. But, as Keynes quipped, in the long run we are all dead; and, with real wages at the bottom (or even the middle) in the US lower than they were a generation ago, it may not be in the lifetime of today's workers, or even in their children's lifetime, that those at the bottom see the fruits of globalization.

The advocates of globalization have thus been put into a corner. They may be able to argue that liberalization will increase GDP, but they cannot argue that it will make most individuals better off *unless they simultaneously argue for a change in the way globalization is managed*.

Some countries have responded in exactly the wrong way. They have cut back on social protections, exacerbating the inevitable "economic" problems already discussed. This is increasing the backlash against globalization. One cannot ask those who are being made worse off by globalization to accept further cutbacks in social spending, all in the name of some illusory benefits to be received in some distant future. Of course, all countries must always modify existing social arrangements. Some countries did have excessive labor market rigidities, and excessive job protections can weaken incentives to work.

In this respect, some contrast Japan's old system of life-long employment (which always affected only a fraction of the labor force) and America's "ruthless" capitalism, where workers are fired at will. Some have claimed that America's system induces people to work harder. I think the evidence on that score is not clear. What is clear is that American workers face high levels of insecurity, that there is a real social cost to this insecurity, and that it undermines individuals' willingness to invest in job-specific training, which would enhance productivity. While some countries may have gone too far in providing job protection; there is an equally persuasive case that America has not gone far enough. The challenge is to find the right balance.

A few countries have been doing better than others, and it is instructive to see what they have done. The Scandinavian countries have followed a different model of the market economy, in which there is more social protection. To be sure, there are adjustments: some in Sweden are now arguing for toughening disability standards, and in the past, there were some adjustments in the size of unemployment benefits. Nonetheless, by and large, these countries provide far stronger safety nets and higher levels of social protection than do other countries around the world.

Of course, it takes money to finance these benefits, and the fiscally responsible governments in the region have accordingly raised taxes to among the highest levels in the world. Yet, in terms of both standard measures of economic performance and broader

measures of societal well-being, these countries have done well. Indeed, in terms of the United Nations Development Program's broad Human Development Indicator, the US, in tenth place, ranks below all of the Scandinavian countries. These countries have also been successful in terms of the penetration of new technologies. Their success was not *in spite* of high taxes, but because of them, enabling these countries to provide a strong safety net and the heavy investments (e.g., in human capital) necessary for success in the modern economy. A strong safety net enables individuals to undertake more risk than they otherwise would, and risk-taking too is a hallmark of success in the competitive era of globalization.

While different Scandinavian countries followed somewhat different policies, here is a brief summary of some of the key ingredients:

- Strong education programs: adapting to new technologies and responding to the rapid changes imposed by globalization requires high levels of human capital; the evidence is that more educated people move more easily from job to job. These countries also emphasized life-long learning; successful education involves learning to learn.
- Active labor market policies to help train workers who lose their jobs to move to new jobs. But, of course, there have to be jobs to which they can move.
- Full employment. Maintaining high levels of employment is an essential ingredient of good macroeconomic policy that has, unfortunately, often been put second to maintaining low and stable inflation.
- Strong safety nets. Small and medium sized businesses, which have been among the most important sources of job creation and innovation, face a large probability of failure. A strong safety net, combined with high levels of employment, enables individuals to undertake the associated risks.
- Safety nets that are obligations of the state and individuals, not of companies. In the era of globalization, firms need to focus on producing new products at low prices, not providing social services. In the past, under modern capitalism (as under old socialism), firms did both, and their success depended on how well they performed in both arenas. Today, GM has been overtaken by Toyota, and faces the threat of bankruptcy. Part of the problem is that it did not adequately anticipate the need to manufacture more fuel-efficient cars; but part of its problems lies with health insurance costs, including the legacy from its retirees. During the Clinton Administration, one of the important initiatives on which I was engaged was facilitating worker mobility by ensuring that pensions and health insurance were portable, so that individuals could move from job to job without losing these important social protections.

One other ingredient of Sweden's policies is its support for families – maternity/paternity leave and daycare centers. This has allowed a larger fraction of women to participate in

the labor force than otherwise would have been the case. Again, the costs have been substantial – up to 1% of GDP – but there is a broad consensus that the benefits (which go beyond just the increased GDP) are more than worth the costs.

A full response to globalization must go beyond the labor market. Recognizing that globalization will make some individuals worse off means that we must introduce more progressive tax systems, including an earned income tax credit (supplementing the wages provided by firms), so that individuals who work full time should at least receive a living wage, however that may be defined.

Responding to the competition implied by globalization also requires increasing productivity, both by increasing the quality of the labor force and increasing the productivity of firms. In the nineteenth century in the US, research conducted in America's universities was brought to family farms through government-funded extension services; today, we need to do the same in manufacturing, through a manufacturing extension service. This is particularly important for small and medium sized businesses.

More generally, innovation is a public good, and therefore it will be under-provided by unfettered markets. This is especially true for innovations designed to save scarce (and under-priced) environmental resources. I described earlier how China was working to create a stronger independent innovation system. But other countries, too, should be working to strengthen and redirect their innovation systems. This entails a more innovation-oriented intellectual property regime, and broader support for research universities.

Lack of transparency and the crisis at the World Bank

The world has been fortunate not to have had a financial crisis for several years now. As a result, the spotlight has been shining less intensively on the IMF – though there is continuing concern, noted earlier, that it has done nothing about the persistent global imbalances. But poverty in the Third World remains one of the world's most pressing problems, and the international institution whose responsibility it is to do something about it, the World Bank, was plunged into crisis in 2007.

While lack of transparency was not the cause of the East Asia crisis, the debate over transparency had the salutary effect of shifting a focus on government: what it does and how it does it. Good governance has become the hallmark of development policy discussions in the twenty-first century. The IMF and the World Bank became the most peculiar preachers of this new orthodoxy – peculiar because their own governance is so flawed. Their heads are chosen by an “old boys” club: the US gets to appoint the head of the World Bank, and Europe selects the head of the IMF. This arrangement may have worked at the time of the founding of the Bretton Woods institutions, an era when colonialism was still alive and well, but it makes no sense in the now. Indeed, the US president appoints the president of the World Bank without even the vetting of the US Senate to which American officials are subjected.

President George W. Bush used, or abused, this possibility to appoint his friend Paul Wolfowitz, who had played a key role in the Iraq war. He was one of the neo-conservatives who thought that invading Iraq would not only get rid of a nasty dictator, but set in motion a new dynamic of democracy in the Middle East. He and the other missionaries of regime change disdained normal bureaucratic processes, which serve to provide checks and balances within the government. Procedures had been put in place to ensure the accuracy of information and intelligence, but they wanted only information that could justify going to war, so they short-circuited these processes, and they got the information they wanted. But in the end, the information – for example, on the existence of weapons of mass destruction – turned out to be totally wrong.

Faulty American intelligence was, of course, no excuse. As Hans Blix, who had been engaged in arms inspection in Iraq for years, pointed out, the Americans had only to read the UN reports to know that the allegations of weapons of mass destruction were almost surely wrong. In other ways, too, the Bush administration, in which Wolfowitz played such a prominent role, deliberately lied to the American people and the world, claiming, for example, that there was a connection between Saddam Hussein's Iraq and Al Qaeda.

In their relentless drive to war in Iraq, the Bush administration displayed contempt not only for the truth, but also for international law. The administration had already demonstrated a similar attitude towards multilateralism, as they rejected the Kyoto Convention and the International Criminal Court (putting pressure on other countries not to join). The UN was created to prevent war, and an attack by one member country against another was a violation of international law. But the US came up with a new doctrine: pre-emptive war. In the end, although the UN refused to endorse the idea, the US and its "coalition of the willing" went ahead anyway. The rest, as they say, is history. Not surprisingly, in much of the rest of the world, the war proved very unpopular, especially given the number of civilian deaths (by one account, more than half million), Americans' engagement in torture, and the Bush administration's defense of the right to use it. So it was not surprising that when Bush nominated Wolfowitz to be the new head of the World Bank, the idea was not received well, either inside or outside the Bank. In this case, Bush sealed the appointment with a few phone calls to friends like Tony Blair; development and finance ministers, who should have been intimately involved in the decision, simply ratified the "done deal"; and the Bank's Board then ratified the agreements made in the capitals.

Wolfowitz' central role in the Iraq war did not constitute a strong recommendation to head the world's most important multilateral institution devoted to fighting poverty. His most famous economic pronouncement – that Iraq would be able to pay for its own reconstruction – did not enhance his credibility. Nor did his seeming unawareness of the intractability of the Shiite/Sunni divide and other internal conflicts within Iraq enhance his credibility for political analysis. (The strategy of the US Defense Department, where Wolfowitz was Deputy Secretary, for dealing with the aftermath of the war is often blamed for making what would have been a difficult problem impossible.)

But the critics inside and outside the Bank gave Wolfowitz the benefit of the doubt; some said that perhaps he would be another Robert McNamara, the Defense Secretary who mired the US in the Vietnam War, but used service at the Bank as penance. But while McNamara recognized his mistakes, Wolfowitz did not.

At first, there was reason for hope: Wolfowitz was forceful in arguing for debt forgiveness and the end of agricultural subsidies. Soon, however, he seemed to surround himself with a “Praetorian Guard” of American advisors, with little or no experience in development. There was little that resembled a coherent development strategy, but simply an expansion of the fight against corruption that his predecessor, James Wolfensohn, had initiated years before

It was laudable that Wolfowitz continued this anti-corruption strategy. Wolfensohn had raised the issue of governance to the prominence that it deserves in the development agenda. Before that, the Washington Consensus policies pushed by the World Bank had focused on downsizing government, not strengthening it. Some argued that the Bank’s charter did not allow it to deal with issues like corruption; these were “political,” not economic. As Chief Economist of the World Bank at the time, I argued that corruption was no less an economic problem than other issues on the Bank’s agenda, like privatization, and that failing to address it risked undermining growth and poverty alleviation.

By the time I left the Bank, these ideas were widely accepted. But corruption is only part of a more comprehensive development agenda; aid effectiveness can be undermined just as much by incompetence as by corruption; and corruption itself has to be attacked comprehensively – for example, by eliminating the secret bank accounts that facilitate it. (That was why I was particularly critical of the Bush administration’s veto, in August 2001, of the OECD’s efforts to do something about these secret accounts.)

At the time that the corruption agenda became central to the Bank’s mission, there were worries concerning the politicization of corruption. I believed then, and still believe, that that is not inevitable. But what happened has justified concerns about the corruption of the anti-corruption agenda – that corruption would be cited to deny assistance to those “out of favor,” but overlooked when political concerns dominated. How else can one justify the push to provide assistance to Iraq, a country rife with corruption?

A further concern that was not fully anticipated has also been raised in country after country: due process. Political opponents always fling charges of corruption; sometimes they are true, sometimes they are not, and often there is an element of ambiguity, as Wolfowitz claimed in his own case. The World Bank, in its efforts to support democracy and good governance, must insist on the highest standards of due process; charges of corruption should be treated seriously, and the evidence turned over to national authorities for prosecution in open, transparent, and independent proceedings. To my mind, among the most serious charges raised against the World Bank in the past two years is that it has not adhered to these standards. It is these charges, not just charges of corruption within the World Bank, that have undermined the Bank’s credibility.

In a sense, if fighting corruption was to be the Bank's central message, Wolfowitz was a strange person to send as a messenger, for the US Defense Department (and the Bush administration) had itself been subjected to widespread criticism for corruption. The single-source contracting that awarded lucrative contracts to Halliburton, the company that US Vice-President Dick Cheney had served as CEO, had raised questions around the world, even more so when allegations of excessive charges and tax avoidance were raised. How could Wolfowitz criticize Bank procedures and champion procurement processes that were free from corruption when his own Defense Department had engaged in such flawed practices?

Especially after the Wolfowitz corruption scandal broke – in which he was accused of arranging a promotion and pay increase for his girlfriend that broke Bank rules, and after it was revealed that he refused to reclude himself from professional contact with her – it was inevitable that he had to leave. What little credibility he may have had was lost. While his magnanimity toward his girlfriend may have earned him some points for chivalry, there was something unseemly about her being seconded to the US State Department at a salary that exceeded even that of the Secretary of State, with a guarantee of reentry at the level of a bank Vice-president. Normally, only top Bank staff earn that position, after years of hard work, much of it under difficult conditions in the field, and in keen competition with other top professionals from around the world.

The whole episode demonstrated the insensitivity of the Bush crowd to democratic processes. Indeed, as the scandal continued, other episodes were brought to light where Bank rules and procedures had been broken or short-circuited, including those involving eavesdropping on e-mails. What is at issue, of course, is not just a violation of ethics or Bank procedures, though those are important. Nor is it just the distortions of the record that Wolfowitz's team has repeatedly put forward in his defense – what the World Bank's former general counsel, Roberto Danino, described as a series of “half-truth[s] that misleads the reader and hide [Wolfowitz's] wish not to comply with bank rules.” For example, it required the investigative reporting of newspapers like the *Financial Times* and the close scrutiny of some NGO's to discredit the Bank's disingenuous defense of the appointment of Suzanne Folsom, a close Republican friend of Wolfowitz, as head of the Office of Institutional Integrity. While the Bank claimed that Folsom's appointment to the office, which is supposed to be an independent monitor of the Bank and its president, followed an international search, it turned out that Folsom's name was not on the short list produced by the search. The real issue, then, is that Wolfowitz and his team did not seem to understand that being President of the World Bank is a privilege, not an entitlement. Such a stance does little to engender the long-term confidence that is so badly needed. Indeed, it reinforces the sense that there is a lack of understanding of what is required to lead a multilateral institution.

In democratic societies, leadership requires the confidence of those being led. Wolfowitz lost that confidence and it was clearly impossible for him to restore it in the three years remaining in his lame-duck tenure. (He could, of course, have tried to appoint more loyalists at the top, as he did when he appointed Ana Palacio, former Spanish Prime

Minister Jose Maria Aznar's foreign minister, as World Bank General Counsel. Palacio, an outspoken supporter of the Iraq War, lacked development experience. But that would only have led to more alienation among the 10,000 employees who have to carry out the Bank's mission.)

There is an old expression that fish rot from the head. So, too, good governance starts from how the head is chosen. Good governance in a democratic, multilateral institution starts from choosing the best individual, regardless of nationality, race, gender, or ethnicity. There may be honest differences of opinion about essential, or at least desirable, characteristics, but surely the list of qualifications would include a command of development economics, political experience, and demonstrated managerial expertise in running a large multilateral organization. These are the characteristics that are likely to earn the respect of the Bank's multiple constituencies and stakeholders – its staff, donor countries, recipient countries, and the NGO's that have been such an effective voice in raising the world's moral conscience concerning the need for foreign assistance. It may not be necessary that the head come from the developing world, but certainly someone from the developing world has a natural advantage in understanding the problems that developing countries confront. If good governance is to be part of the message of the World Bank (and the IMF), they must practice what they preach. The way their heads are chosen must change.

We should put the Wolfowitz controversy in perspective. Wolfowitz's magnanimity toward his girlfriend is surely petty theft compared to the billions of dollars of unaccounted spending by the US Defense Department from which Wolfowitz came. The lack of judgment in awarding his girlfriend these benefits must pale in comparison to Administration pronouncements that the Iraq War – now conservatively estimated to cost \$1-2 trillion – would pay for itself, or at most cost \$50 to \$60 billion. The consequences of the half-truths that have come out of the World Bank in defense of his actions in this and other cases are insignificant relative to those associated with the falsehoods that led up to the Iraq war. The Bank's procedural problems look puny compared to the Defense Department's single-sourcing of contracts to Halliburton during his tenure at the Defense Department. The lack of due process toward developing countries that have had their aid cut off, or threatened to be cut off, is nothing compared to the lack of due process for the detainees at Guantánamo Bay.

Wolfowitz has been described as a man of principle: there may have been misjudgments in the Iraq war, but, it is argued, they were part of a well-intentioned effort to create strong new democracies in the Middle East. But, surely, a man of principle should have resigned when the abuses at Abu Ghraib came to light; if not then, surely when the Bush administration endorsed torture, in effect renegeing on the Convention against Torture and Other Cruel, Inhuman or Degrading Treatment or Punishment, which the US and every other civilized country had signed.

But while the infractions that were the subject of the debate about Wolfowitz's tenure at the World Bank may indeed seem trivial, there is another sense in which they loom large. Global poverty is one of the most pressing problems facing the world today, and the

World Bank is the most important global institution in fighting poverty. Even though what it does is small relative to the size of the challenges, what it can and has done can make a big difference for hundreds of thousands of people in the Third World. To look the other way would have reinforced the growing cynicism in the Third World – a cynicism which nurtures conflict and political turmoil. The advanced industrial countries have already shown their hypocrisy in important areas like trade-and-agriculture.

But while Europe *eventually* acted forcefully in getting Wolfowitz removed, they did not follow up as they should: they should have demanded that the way the president is chosen be changed. Instead, President Bush was again allowed to appoint one of his “team,” Robert Zoelick, who had been deputy secretary of state and the U.S. Trade Representative. Another active member of an administration committed to undermining multilateralism was chosen to head one of the most important multilateral institutions. To his credit, he had played a lead role in getting the “development round” of trade negotiations off the ground; but he was largely responsible for its evolution as well—to the point where the development round did not even deserve that name. He ardently defended the cotton subsidies, from which 25000 rich American farmers benefit, but at the expense of more than ten million poor farmers in the developing world who are pushed ever deeper into poverty. He was a strong advocate of the bilateral trade initiatives, which undermined the multilateral trade regime, which the world had worked so hard to create over a span of six decades. These bilateral trade agreements were even more unfair to the developing countries, and made it even more difficult for them to get access to life saving medicines. As a result of these agreements, thousands in the developing world will die unnecessarily. Were these the credentials that one would have sought in looking for a new head of an institution supposedly devoted to increasing the well-being of the developing world? Regrettably, the process of choosing the head was as untransparent as in the past: from what one could see, these questions were never raised.

Globalization and Global Warming

I conclude this essay with a few remarks about climate change and globalization. Scientists have long predicted that an increase in the concentration of greenhouse gases in the atmosphere could lead to marked changes in weather, including global warming, and their forecasts are turning out to be uncannily correct. We are just beginning to fathom the consequences. The world now knows that it needs to respond, but efforts to date have been inadequate. The Kyoto Protocol left untouched three-quarters of the sources of greenhouse gases: the US (which refused to join), the developing countries (upon which no obligations were imposed), and deforestation (which is contributing almost as much to global emissions as the US.)

Addressing global warming is a matter of global social justice: the developed countries are responsible for most of the increases in the carbon concentration in the atmosphere, but it is the developing countries that are most likely to be severely affected. And while the rich countries might be able to afford the expenditures to deal with its consequences, the developing countries cannot.

The problem is that there is no framework around which a global agreement can be reached. The cap-and-trade system – under which each country is given a “target” and is allowed to sell emissions below that target, or buy emissions if it exceeds that target – has a fatal flaw: there is no method by which countries can agree on the targets. The system adopted in Kyoto, according to which targets are based on emission levels in 1990, will not be acceptable to the developing countries.

Two other flaws have come to the fore. One is that the system is open to corruption. Within countries, the assignment of targets effectively entails allocating billions of dollars. When this is discretionary, the opportunities for corruption are obvious. But even when it is rule-based, there is large scope for “investments in campaign contributions” to get rules that favor one’s own company.

Moreover, at the national level, it is unclear whether emissions should be counted in the country where a good was produced or where it is consumed. Should China be blamed for the pollution of its manufacturing industry, which produces goods that are consumed by Americans? In theory, one could argue that it shouldn’t make much difference whether we impose taxes at each stage of production or at the end. But if not all countries have obligations, or if there are different obligations on different countries, it can make a big difference. If some countries are not part of the system, emissions-intensive production will shift to those countries. Global emissions will not be reduced; indeed, they may rise.

I have argued that a global carbon tax would be just as efficient in reducing emissions, and would avoid the inherent difficulties associated with choosing targets. Part of the global carbon tax system would be a tax on the importation of the carbon content from any country not adhering to the global agreement. Thus, if the US or China opted out, the EU and Japan would impose a tax on the carbon content of all goods from these countries. This would, of course, provide the US and China with an incentive to join the global agreement. But it would also preclude any incentive for firms to move around the world looking for some locale where there is no emissions tax. With a global carbon tax, the question of whether the customer or the producer should bear the burden becomes less important; presumably, if the producer has to pay the tax, it will be passed on to the consumer (which is why it is essential that the consumer must pay the tax if the producer hasn’t). In current circumstances, Europe and Japan would impose taxes on carbon-intensive inputs from the US, not as a punitive measure, but to create a level playing field by ensuring that American firms do not gain an unfair advantage from not paying the full social costs of their actions.

Japan played a central role in the success of Kyoto. It must now play a central role in the success of the post-Kyoto agenda. This entails enunciating a set of principles:

- Any successful approach to global warming has to be global in scope, efficient, and fair, which will require *common but differentiated responsibilities*. Fairness

does not mean that because a country has polluted more in the past it should be entitled to pollute more in the future.

- Fairness, and the principle that the “polluter pays,” means that those who have contributed to the increase in carbon concentration in the atmosphere over the past 200 years should, in some sense, be entitled to less pollution forwarding the future, or that they should compensate the rest of the global community, e.g., through support for emissions-efficient technologies in developing countries.
- Any efficient and fair system will almost surely entail a portfolio of measures; the challenge facing the world in reducing emissions to an acceptable level is such that there is no magic bullet. But among these are price-based measures that provide *appropriate incentive structures*. Because so many decisions involving energy usage are so long lived – a transportation system or housing lasts decades – it is imperative that those involved in making decisions today take into account the increasing price of carbon in the future. This would create adequate incentives for installing, say, low-emission power plants. How these increasing carbon prices are achieved – whether through cap-and-trade or carbon taxes – is a matter that can be left to countries.
- At least in the short run, it will be necessary to impose certain minimum standards for governments and for the private sector. These might include *eliminating subsidies for fossil fuels and taxes on alternative fuels* and creating a *set of standards* for power-generating plants, electrical appliances, housing, automobiles, airplanes, and other major sources of pollution. Such standards should prohibit coal-fired plants in advanced developed countries, unless there is some provision for carbon storage. Despite the many complexities in dealing with global warming, we are fortunate that a large fraction of emissions is related to a limited number of sources, so that appropriate standard-setting can make a major difference.

Much has happened in the decade since the Kyoto Protocol was concluded, and Japan should be pleased with the important contribution that it made to improve the global environment. But we now know that the problems on which the Protocol focused are far more serious than most realized a decade ago, and far stronger actions are called for today. Japan chair the 2008 G-8, which provides a good opportunity for it to advance this agenda.

Concluding Remarks

As we commemorate the tenth anniversary of the East Asia crisis, we are reminded of an important piece of conventional wisdom: every crisis comes to an end, but it is only during the crisis that reforms can be carried out to avoid the next crisis. Not only has the crisis come to an end, but the world has been experiencing some of the fastest rates of growth ever. Yet, despite the shadow over the future cast by huge global imbalances, the world is at an impasse: it seems incapable of undertaking the important changes in the

global reserve system that are needed – changes that would not inoculate the world against another crisis, but that would make such crises less likely, and at the same time enhance prospects for more stable, more prosperous, and more equitable growth for the entire world.

Our failures to act now to reform the global financial system will inevitably impose a cost; but these are mistakes that, at a price, can be corrected. By contrast, in the case of global warming, if we fail to act now, before the crisis is upon us, the consequences will be more serious. It will be difficult, if not impossible, to undo the increases in atmospheric concentrations of greenhouse gases, and thus difficult, if not impossible, to avoid the consequences. We simply cannot afford to wait.