State of the World Economy, 2011-2012:

Whither or Wither?

US•KOREA INSTITUTE AT SAIS

한국금융연구원 KOREA INSTITUTE OF FINANCE

SAIS WASHINGTON · BOLOGNA · NANJING Asian Studies Program

중앙일보

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On November 18, 2010, the U.S.-Korea Institute at SAIS and the Korea Institute of Finance, sponsored by the Asian Studies Program at SAIS and the *JoongAng Ilbo*, hosted the one-day conference, "State of the World Economy, 2011-2012: Whither or Wither?" at the Paul H. Nitze School of Advanced International Studies (SAIS) in Washington, D.C.

This volume contains the speeches and papers that were presented that day and subsequently further refined by the authors to reflect discussions during the conference.

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Introduction

The ramifications of the global economic crisis are probably the most important set of issues that we will face during this decade, possibly even in the entirety of our professional lives. The interconnectedness of the world's developed economies with its emerging ones is what will drive global growth forward in the coming years, but it remains uncertain how much pull the various locomotives of global growth will have. Looking beyond the United States and its place in the world economy, the purpose of this conference has been to think about how different centers of economic growth are going to interact with one another to help bring the world out of the crisis.

Events, both political and economic, will ripple from one part of the globe to another: how things happen in Europe will affect how they happen in China, which will affect things in Japan, India, and so forth. The organizers of this conference sought to go beyond simply describing each national situation to understanding the underlying dynamic in each case and aggregating these to gain the insight necessary to ensure that a relatively tepid recovery does not become a relapse.

"Whither or Wither?" was the question we started out with. Given the few months it takes to put these things together, we asked ourselves whether this would be too clever by half, making us look pessimistic in the end and simply out of step with what was going on in the world. But reflecting on the contributions of out panelists, it is our conclusion that while the Great Recession did not become the Great Depression, it has not become the Great Recovery either. Our expectation is that, as we continue to have slow growth in the advanced economies, the real question for the world economy in the years ahead will be just how slow that growth is going to be, and how politically tolerable it will be both in the United States, Western Europe, and Japan. China and South Korea, after sharp initial downturns, have fared far better, but sustainability is not a given, especially when the consuming nations continue to struggle.

Looking at the communiqué released by the G-20 Summit in Seoul in November 2010, it is clear the world's major economic powers agree on the principle of rebalancing the global economy, but not on the "when" and the "how" of doing it. And we would submit, it is all about the "when" and the "how," and the resulting political tensions that we believe are inevitable. If we end up moving towards a four or five-year period of very slow growth, with lots of austerity and unemployment here in the United States and in Western Europe, and with the emerging economies slow to allow appreciation of their currencies, the pressures for one form or another of protectionism will not be trivial. The political demand to find an easy way out of the economic doldrums could lead to calls for tariffs and various forms of currency manipulation, and we fear these demands could outrun our collective wisdom favoring cooperation and openness. We are witnessing a series of still unfolding major events. A year from now, we will have better data both on the political and economic consequences of the global downturn and the course of recovery, and perhaps a better sense of just what the long term trajectory will entail. It may be wise to address these sets of questions in one year's time.

Many thanks to the organizers: the Korea Institute of Finance, the U.S.-Korea Institute at SAIS, the Asian Studies Program at SAIS, and the *JoongAng Ilbo*, for both coverage and sponsorship of this conference. More than anything, we would like to thank the event's speakers, discussants, and participants; their contributions will help us come as close as we reasonably can to solving all of the world's most important economic problems in a day-long conference.

Conference Agenda and Bios

Thursday, November 18, 2010	
8:30-9:00	**Welcome Coffee and Registration**
9:00-10:00	**Welcoming Remarks:** • **Jae Ku,** Director, U.S.-Korea Institute at SAIS • **Jessica Einhorn,** Dean, The Paul H. Nitze School of Advanced International Studies (SAIS), Johns Hopkins University • **Tae-Joon Kim,** President, Korea Institute of Finance **Opening Keynote Address: Duck-Koo Chung,** Chairman, North East Asia Research (NEAR) Foundation and former ROK Minister of Commerce, Industry, and Energy
10:00-12:00	**SESSION I – WHITHER THE GLOBAL ECONOMY, 2011-2012?** **Chair: Roger Leeds,** Director of the Center for International Business and Public Policy, and Research Professor of International Finance, SAIS **Contributors:** • **Kevin H. O'Rourke,** Professor of Economics, Trinity College • **John Taylor,** Mary and Robert Raymond Professor of Economics, Stanford University **Discussants:** • **Taeyoon Sung,** Yonsei University • **Thomas Willett,** Horton Professor of Economics and Director of the Claremont Institute for Economics, Claremont Graduate University and Claremont McKenna College
12:00-1:30	**Luncheon Keynote Address: Duk-Soo Han,** ROK Ambassador to the United States
1:30-3:30	**SESSION II – DEMAND, DEFLATION, AND DEBT IN THE "LOCOMOTIVE" ECONOMIES, 2011-2012** **Chair: Karl D. Jackson,** Director of Asian Studies, SAIS **Contributors:** • **Creon Butler,** Senior Advisor, International and Finance Directorate, UK Treasury • **Daniel Rosen,** Visiting Fellow, Peterson Institute of International Economics; Principal, Rhodium Group • **David Asher,** Non-Resident Senior Fellow, Center for a New American Security • **Kalpana Kochhar,** Deputy Director, Asia and Pacific Department, International Monetary Fund **Discussants:** • **Yongsung Chang,** Associate Professor of Economics, University of Rochester • **Ken Kang,** Division Chief, Asia and Pacific Department, International Monetary FundMF • **Brahima Coulibaly,** Senior Economist, Emerging Market Economies Section, Division of International Finance, Board of Governors of the Federal Reserve System

3:30-3:45	**Break**
3:45-5:30	**SESSION III – IMPLICATIONS AND FUTURE OF KOREAN ECONOMY, 2011-2012** **Chair: David M. Lampton,** Dean of Faculty; George and Sadie Hyman Professor of China Studies; Director of the China Studies Program, SAIS **Contributors:** • **Min Chang,** Research Fellow, Korea Institute of Finance • **Marcus Noland,** Deputy Director and Senior Research Fellow, Peterson Institute for International Economics • **Yoon-Shik Park,** Professor of International Finance, George Washington University School of Business **Discussants:** • **Deok-Ryong Yoon,** Senior Research Fellow, Korea Institute for International Economic Policy • **Peter Heller,** Senior Adjunct Professor of International Economics, SAIS • **Ramkishen Rajan,** Associate Professor of Public Policy; Co-Director, Center for Emerging Market Policy, George Mason University
5:30-6:00	**Summation and Closing Remarks**

David Asher is a Non-Resident Senior Fellow at the Center for a New American Security, where he specializes in issues related to Asia, economics and security. Dr. Asher has worked extensively as a subject matter expert on countering illicit financial networks and transnational threats for the U.S. government. From 2001 to 2005, Dr. Asher served as senior adviser for East Asian and Pacific Affairs and coordinator of the North Korea Working Group at the State Department, where he helped plan and participated in the Six Party Talks. He also directed the North Korea Activities Group at the National Security Council, overseeing the Bush administration's strategy against the Kim Jong Il regime's illicit activities and finances. He graduated from Cornell University and received his doctorate in International Relations from the University of Oxford.

Creon Butler is the Senior Advisor of the International Finance Directorate of the United Kingdom's Treasury. His work focuses on the G-20 agenda, particularly the framework for strong, sustainable, and balanced growth, global financial safety nets, and reform of the international monetary system. Prior to this position, he served three years as the Minister and Deputy High Commissioner of the United Kingdom to Delhi. He has also served as the director of economic policy and the chief economist and head of the Economic Policy Department at the Foreign and Commonwealth Office (FCO). He was also head of the Monetary Instruments and Markets Division at the Bank of England from 1994 to 1999. Mr. Butler has an M.Sc. in econometrics and mathematical economics and a B.Sc. in economics, both from the London School of Economics.

Min Chang has been Chief of the International and Macroeconomic Finance Division since April 2009 after joining the Korea Institute of Finance as a Research Fellow in January 2009. He worked at the Bank of Korea from 1990 to 2008, where he held a number of key positions. He also served as advisor to the Monetary Policy Board and a visiting economist at the Bank for International Settlement (BIS) in Basel, Switzerland. He currently serves as a member of the following committees: Advisory Committee on Macroeconomy at the National Assembly Budget Office, Committee on Macro-Prudential Supervision at the Financial Supervisory Service (FSS), and Advisory Committee on National Account at the Bank of Korea. Dr. Chang received a Ph.D. in economics from Michigan State University, and a B.A. in economics from Seoul National University.

Yongsung Chang is a macroeconomist who specializes in the analysis of economic fluctuations and labor market dynamics. He obtained a Ph.D. in economics from the University of Rochester in 1997. He has held positions at the University of Pennsylvania and Seoul National University, and has worked for the Federal Reserve Bank of Richmond as a senior economist. Dr. Chang has published 17 research articles in academic journals such as *American Economic Review*, *Journal of Monetary Economics*, and *International Economic Review*. Currently, he is an associate professor at the University of Rochester and Underwood Professor at Yonsei University. He is an associate editor of the *Journal of Monetary Economics*. He is on the editorial board of the *American Economic Journal* and the advisory board of the Carnegie-Rochester Conference Series on Public Policy.

Duck-Koo Chung is now a Visiting Professor at Korea University and Renmin University in Beijing, China. He recently founded the North East Asian Research (NEAR) Foundation in Korea and is also a trustee of the International Financial Reporting Standards (IFRS) Foundation. He began his career as a government official in 1971 and worked at the Ministry of Finance (MOF), the Ministry of Finance and Economy (MOFE), and as a chief negotiator with the IMF during Korea's liquidity crisis. He also spent some time outside Korea as financial attaché at the Korean embassy in London for three years from 1989 to 1992. In 1999, Dr. Chung was appointed as Minister of Commerce, Industry and Energy (MOCIE) and as a Member of Parliament of the Republic of Korea. After 30 years as a government official, Dr. Chung became a professor at the Graduate School of International Studies (GSIS) at Seoul National University and served as the director of the Research Center for International Finance. Also, Peking University in China invited him as a visiting professor in 2003.

Brahima Coulibaly is a Senior Economist in the International Finance Division at the Federal Reserve Board in Washington, D.C. He has worked extensively on policies of emerging market economies and their implications for the United States and the rest of the world. He has written and published on a wide range of issues in macroeconomics and international finance, including a book chapter on the role of China in Asia and the global economy, and several other publications in leading academic journals on, among others, the importance of financial integration for economic growth, monetary arrangements, and financial crises. His research has also provided important contributions to the understanding of investment and consumption theories. Prior to joining the Federal Reserve, Dr. Coulibaly was a research associate at the Institute for Social Research at the University of Michigan from 2000 to 2004. He has also served as adjunct faculty in the Department of Economics at Georgetown University, and as associate visiting faculty at the Darden Graduate School of Business in Charlottesville. Dr. Coulibaly holds a Ph.D. and a Master's degree in economics from the University of Michigan, and a Bachelor's degree in statistics from the University of California at Berkeley.

Jessica Einhorn is Dean of the Paul H. Nitze School of Advanced International Studies (SAIS), Johns Hopkins University. Dr. Einhorn is highly regarded internationally for her knowledge of global capital markets, public finance, and portfolio risk management. Before joining SAIS, she served as a consultant in the Washington office of Clark & Weinstock, a firm that specializes in strategic communication and public affairs consulting. In August 1999, Dr. Einhorn concluded her career of nearly 20 years of service with the World Bank. Prior to the World Bank, Dr. Einhorn held positions at the U.S. Treasury, the U.S. Department of State, and the International Development Cooperation Agency of the United States. Author of *Expropriation Politics*, Dr. Einhorn received a B.A. in 1967 from Barnard College, Columbia University, an M.A. in international affairs in 1970 from SAIS, and a Ph.D. in politics in 1974 from Princeton University.

Duk-Soo Han currently serves as Ambassador of the Republic of Korea to the United States. Prior to this position, he was the 38th Prime Minister of the Republic of Korea from April 2007 until February 2008. He has also held numerous other high-ranking positions in the Korean government. In 2006, he was named chairman of the Presidential Committee on Facilitating KORUS FTA following his service as Deputy Prime Minister and Minister of Finance & Economy. Before being named Minister of Government Policy Coordination in early 2004, he worked as president of the Korea Institute for Industrial Economics and Trade. As Korea's permanent representative to the Organisation for Economic Co-operation and Development, Ambassador Han went to Paris in 2001 before returning to Seoul later that year to serve at the Blue House, first as senior secretary to the president for policy and planning and later as senior secretary to the president for economic affairs. Ambassador Han earned a B.A. in economics from Seoul National University, and an M.A. and Ph.D. in economics from Harvard University. He has been awarded two Order of Public Service and Merit Medals.

Peter Heller is a recognized expert on fiscal policy and public finance. The former deputy director of the Fiscal Affairs Department of the International Monetary Fund, he has advised both industrial and developing countries on broad macroeconomic policy strategies for over 30 years. He is a senior adjunct professor of international economics at the Paul H. Nitze School of Advanced International Studies (SAIS), Johns Hopkins University, teaching courses on public finance, long-term fiscal challenges, international monetary theory, and international financial institutions. He also is a visiting professor at the Graduate School of Governance at the University of Maastricht and at CERDI of the University of the Auvergne. Dr. Heller received a Ph.D. in economics from Harvard University in 1971 and a B.A. from Trinity College, Hartford, CT.

Karl Jackson is Director of the Asian Studies Program and the Southeast Asia Studies Program at the School of Advanced International Studies at Johns Hopkins University. He is former professor of political science at the University of California at Berkeley, adviser to the president of the World Bank, and executive vice president of the International Finance Corporation. He is also a former senior adviser at Cerberus Capital Partners and managing director at International Foreign Exchange Concepts. He was president of the U.S.-Thailand Business Council. He has served as a national security adviser to the vice president of the United States, special assistant to the president, senior director for Asia on the National Security Council, and deputy assistant secretary of defense for East Asia and the Pacific. He holds a Ph.D. in political science from the Massachusetts Institute of Technology.

Ken Kang has been Division Chief of the Japan Division within the Asia and Pacific Department at the International Monetary Fund (IMF) since 2009. Prior to that, he served as deputy division chief of division 5 (Japan and Federates States of Micronesia) from 2006. He has also served as a resident representative and an economist within many various departments at the IMF. Prior to the IMF, he was a teaching fellow in the department of economics at Harvard University from 1993 to 1995 and a fulbright fellow at the Korea Development Institute in Seoul, South Korea from 1992 to 1993. He is the author of the IMF Working Papers, "'Lost Decade' in Translation: What Japan's Crisis could Portend about Recovery from the Great Recession" (Dec. 2009) and "From Crisis to Recovery in Korea: Strategy, Achievements, and Lessons" (Oct. 2001). He received a B.A. in economics from Yale University in 1989, an M.A. in economics from Harvard University in 1991, and a Ph.D. in economics from Harvard University in 1996.

Tae-Joon Kim is the sixth President of the Korea Institute of Finance (KIF). In 1993, he became a professor in the International Management Department of Dongduk Women's University and served as vice president of the university from 2004 to 2006. In 2007, he was a member of the Public Enterprise Evaluation Group at the Ministry of Planning and Budget. Also in 2007, he served as a standing advisor to the Economic Subcommittee of the 17th Presidential Transition Committee. From 2008 to 2009, he was a non-governmental member to the National Economic Advisory Council under the President, and from 2008 to 2009, he was a member of the steering committee at the Korea Investment Corporation (KIC). In 2009, he was also active as a TF administrator for the amendment to the Bank of Korea Act, while in 2010, he served as a member on the Evaluation Committee of the Financial Supervisory Service (FSS). Dr. Kim earned a B.A. and M.A. in economics from Yonsei University. In 1988, he earned a Ph.D. in economics from Columbia University.

Kalpana Kochhar has held the position of Deputy Director in the Asia and Pacific Department at the International Monetary Fund since August 2008, leading the IMF's work on Japan, India, Sri Lanka, Maldives, Bhutan, and Nepal. Prior to taking this position, she spent time in the IMF's Research Department, and in the Asia and Pacific Department leading the IMF's work on India, Australia, New Zealand, Singapore, and Malaysia. She has also worked on China, Korea, and the Philippines. During her Fund career, she has also worked in the Policy Development and Review Department (now known as the Strategy and Policy Review Department) and in the Fiscal Affairs Department. Dr. Kochhar's research interests and publications have mainly focused on studies of Asian economies, including India and China. Most recently, her research has focused on issues related to India's growth, financial, and fiscal policies. She holds a Ph.D. and an M.A. in economics from Brown University, and an M.A. in economics from Delhi School of Economics in India. She has a B.A. in economics from Madras University in India.

David Lampton is Dean of Faculty, George and Sadie Hyman Professor of China Studies, and Director of the China Studies Program at the School of Advanced International Studies (SAIS), Johns Hopkins University. He is the former president of the National Committee on United States-China Relations and past director of China Policy Studies at the American Enterprise Institute and The Nixon Center. He is also a former associate professor of political science at Ohio State University, holds an honorary doctorate from the Institute of Far Eastern Studies of the Russian Academy of Sciences, and is an honorary senior fellow with the Institute of American Studies at the Chinese Academy of Social Sciences. He received his Ph.D. in political science from Stanford University.

Roger Leeds was, prior to joining the faculty at the School of Advanced International Studies (SAIS), Johns Hopkins University, an international finance practitioner for 25 years, working as an investment banker at Salomon Brothers, a senior staff member of the International Finance Corporation (World Bank), a partner at KPMG in charge of its global privatization practice and a managing director of a major private equity firm in New York. He currently serves as chairman of the Emerging Markets Private Equity Association. In addition to SAIS, he teaches at the Wharton School at the University of Pennsylvania. He has been a guest commentator on CBS, CNBC News, CNN, and NPR and has served on various boards and advisory committees. Dr. Leeds holds a Ph.D. in international relations from the School of Advanced International Studies at Johns Hopkins University.

Marcus Noland is a Deputy Director and Senior Fellow and has been associated with the Peterson Institute for International Economics since 1985. His work encompasses a wide range of topics including the political economy of U.S. trade policy and the Asian financial crisis. His areas of geographical knowledge and interest include Asia and Africa where he has lived and worked. In the past he has written extensively on the economies of Japan, Korea, and China, and is unique among American economists in having devoted serious scholarly effort to the problems of North Korea and the prospects for Korean unification. He won the 2000–01 Ohira Memorial Award for his book *Avoiding the Apocalypse: The Future of the Two Koreas*. Noland was educated at Swarthmore College (B.A.) and the Johns Hopkins University (Ph.D.).

Don Oberdorfer is a Distinguished Journalist in Residence and Adjunct Professor of International Relations at the Paul H. Nitze School of Advanced International Studies (SAIS), Johns Hopkins University. As of September 2006, he was named chairman of the U.S.-Korea Institute at SAIS. Mr. Oberdorfer was a journalist for 38 years, 25 of them for *The Washington Post*. His areas of expertise included the White House and Northeast Asia, and he spent 17 years as a diplomatic correspondent based in Tokyo. He has also reported for *The Charlotte Observer*, *The Saturday Evening Post*, and *Knight Newspapers*. His work has won numerous awards for journalistic excellence, including the National Press Club's Edwin M. Hood Award for diplomatic correspondence (1981, 1988) and Georgetown University's annual Edward Weintal Prize for diplomatic reporting (1982, 1993). He graduated from Princeton University in 1952 and returned as a visiting professor in 1977, 1982, and 1986. In 1996, Princeton bestowed on him its Woodrow Wilson Award, given annually to an alumnus for exemplary service to the nation.

Kevin O'Rourke is a Professor of Economics at Trinity College Dublin. He is a coordinator of the CEPR's Economic History Initiative, and an editor of the *European Review of Economic History*. He is also a research associate of the National Bureau of Economic Research, a research fellow of the Institute for the Study of Social Change at University College Dublin, a member of the International Advisory Board of the Centre for the Study of Globalisation and Regionalisation at the University of Warwick, a trustee of the European Historical Economics Society, and an associate editor of *Economics Bulletin*. In the past he has served as a trustee of the Cliometric Society and an editorial board member of the *Journal of Economic History*. His awards include the 1999 American Association of Publishers/PSP Award for the best scholarly book in economics (awarded for *Globalization and History: The Evolution of a Nineteenth-Century Atlantic Economy*, MIT Press 1999, co-authored with Jeffrey G. Williamson); and the 1997–98 Cole Prize for the best article published in the *Journal of Economic History*. He received his Ph.D. from Harvard University in 1989, and has been an assistant professor at the Graduate School of Business, Columbia University, a visiting associate professor at Harvard University, and a college and statutory lecturer at University College, Dublin.

Yoon-Shik Park is currently a Professor of International Finance at the School of Business of George Washington University in Washington, D.C. In addition to George Washington University, he has also taught at Georgetown University and Columbia University. Before joining academia, he worked for the World Bank as a senior economist in the 1970s, joining the Bank in 1970 as the first Korean young professional. He also served as a director on the board of directors of Samsung Moolsan Corporation (Samsung Corporation) in Korea from 1998 to 2009 and he is now on the board of directors of the Korea Economic Institute of America (KEI). Professor Park graduated from Seoul High School and Kyung Hee University in Korea. In the United States, he received MBA in finance from Fairleigh Dickinson University, Kyung Hee's sister university, and DBA (Doctor of Business Administration) in international finance from Harvard University Graduate School of Business Administration. He also received both an M.A. and Ph.D. in economics from George Washington University.

Ramkishen Rajan is an Associate Professor at the School of Public Policy, George Mason University (GMU), a position he has held since January 2006. Prior to that, he was on the faculty of the School of Economics, University of Adelaide for five years. He is also currently the joint economic research program coordinator and visiting senior research fellow at the Institute of Southeast Asian Studies (ISEAS) and an associate faculty member at the Center for Global Studies, George Mason University. Professor Rajan specializes in international economic policy with particular reference to the developing Asia-Pacific region. He has published numerous journal articles and book chapters, 12 books (5 authored/co-authored) and a number of policy briefs, op-eds, and book reviews on various aspects of international economics. He holds economics degrees from the National University of Singapore (B.Soc.Sci., Hons.), Michigan (M.A.) and Claremont (M.A., Ph.D.).

Daniel Rosen is a Visiting Fellow at the Peterson Institute for International Economics and a Principal at the Rhodium Group, a New York-based research firm. He is also an adjunct professor at Columbia University's School of International and Public Affairs (2001–present). Rosen was a member of the National Economic Council staff (2000–01), where he served as senior adviser for international economic policy. His work has focused on the economic development of East Asia, particularly greater China, and U.S. economic relations with the region. Other areas of research include energy, agriculture and commodities, trade and environment linkages, and economic transitions and competitiveness. His forthcoming books include *China's Energy Evolution* and *The Implications of China-Taiwan Economic Relations*.

Taeyoon Sung graduated from Yonsei University and earned a Ph.D. in economics from Harvard University in 2002. He is now a professor in the School of Economics at Yonsei University. Before joining Yonsei University, he served as a professor in the Graduate School of Management at the Korea Advanced Institute of Science and Technology (KAIST), and as a research fellow for the financial economics team in the Korea Development Institute. Now, he is both a committee member of the policy division of Financial Development Committee and a director of Korean Economic Association. He provides research activities in areas such as finance, international economics, and macroeconomics. In particular, he is conducting research on unifying firms' financial characteristics and financial sector into macroeconomic analysis.

John Taylor is the Mary and Robert Raymond Professor of Economics at Stanford University. He formerly served as the director of the Stanford Institute for Economic Policy Research where he is currently a senior fellow. He is also the George P. Shultz Senior Fellow in economics at the Hoover Institution. His fields of expertise are monetary policy, fiscal policy, and international economics. Dr. Taylor has an active interest in public policy. He served as senior economist on President Ford's Council of Economic Advisers, as a member of President George H.W. Bush's Council of Economic Advisers, and as economic adviser to the Bob Dole and George W. Bush presidential campaigns. For four years, from 2001 to 2005, Dr. Taylor served as Under Secretary of Treasury for International Affairs where he was responsible for U.S. policies in international finance, including currency markets, trade in financial services, foreign investment, international debt and development, and oversight of the International Monetary Fund and World Bank. His book *Global Financial Warriors: The Untold Story of International Finance in the Post 9/11 World* describes his years as head of the international division at Treasury. Before joining the Stanford faculty in 1984, he held positions as professor of economics at Princeton University and Columbia University. Taylor received a B.A. in economics summa cum laude from Princeton University in 1968, and a Ph.D. in economics from Stanford University in 1973.

Thomas Willett is the Horton Professor of Economics and Director of the Claremont Institute for Economic Studies in the Department of Economics, Claremont Graduate University and Claremont McKenna College. His areas of specialization include international and monetary economics, political economy, and economic policy, international financial crises and public choice or political economy analysis of national and international economic policies. A major facet of his professional activity has been to improve the dialogue between economists and political scientists. He is the director of the Claremont Institute for Economic Policy Studies, and former head of the International Research Department at the U.S. Treasury.

Deok-Ryong Yoon is a Senior Research Fellow and head of the G-20 research team at the Korea Institute for International Economic Policy (KIEP). He was a member of National Economic Advisory Council and has also served as an advisor to Minister of Finance. In 2007, he was a visiting professor at the U.S.-Korea Institute at the Paul H. Nitze School of Advanced International Studies (SAIS), Johns Hopkins University. He is also an invited professor at the Institute for Korean Unification Studies at Yonsei University. Dr. Yoon received his B.A., M.A., and Ph.D. in economics from Kiel University in Germany. He was an executive director of PECC Korea and director general of APEC Education Foundation. He continues to serve as a member of experts groups and advisory committees in diverse ministries and presidential offices in Korea. In addition to numerous papers and books, he is the author of "A Roadmap for East Asian Monetary Integration" (KIEP 2007).

Opening Ceremony

Jae H. Ku
Director
U.S.-Korea Institute at SAIS

Dear ladies and gentlemen and distinguished guests, welcome. Good morning and welcome to the conference on the "State of the World Economy, 2011-2012: Whither or Wither?" My name is Jae Ku. I am the Director of the U.S.-Korea Institute at SAIS. We're delighted to co-host this conference with the Korea Institute of Finance, which is celebrating its twentieth anniversary. Congratulations. We're also co-sponsored by the Asian Studies Program of Johns Hopkins University School of Advanced International Studies and we're generously supported by *JoongAng Ilbo*, a major Korean newspaper, belonging to the largest media group in Korea.

At this time, I would like to introduce our dean to say a few welcoming remarks. Dean Jessica Einhorn is the real expert on the issues of today's discussion. She is the first SAIS graduate to become dean and is known internationally for her influence on the development of modern global capital markets. She previously served as managing director, vice-president, and treasurer of the World Bank. Please welcome Dean Einhorn.

Jessica Einhorn
Dean, School of Advanced International Studies
Johns Hopkins University

Thank you, and thank you to Jae Ku, the director of our program here today, and to Professor Karl Jackson, who worked with him on it, and to our distinguished guests for this discussion of the state of the world economy. The U.S.-Korea Institute at SAIS is providing us today with the opportunity to exchange perspectives on the global economy from the two different sides of the Pacific. Actually, we are stretching across to the Atlantic as well, as some of our speakers today are from the U.K. So you're getting the Anglo-Saxon perspective from the U.S. and the U.K. and you're getting the powerhouse of Asia perspective from some of our very distinguished Korean guests. South Korea, of course, hosted the G-20 Summit, and it was the first Asian host outside of the G-8. The G-20 sold some and addressed some really important mid-term and long-term issues. It's a great opportunity now to explore the raw data and shared precepts, so we have good economics on both sides. Yet with the sharing of all this data, we can still come out with varying and even deeply clashing perspectives on what to do. For the G-20 members, indeed, where you sit is where you stand.

I actually re-read yesterday the 22-page communiqué, which I don't suspect all the leaders read fully through. But it did omit agriculture, I should say, which is something that has appeared on other G-8 Summits. Given the momentum now on commodity prices and the concerns again about food security, the inflation in some of the Asian economies and some of what's going on even here in the United States, I think this will be an important issue for future summits, but it got missed. It got missed because they had to discuss the global economic recovery, which is perhaps walking slowly on two legs, but certainly not running.

Developing the framework for strong, sustainable, and balanced economic growth, which has been the goal of all economic summits for as many decades as we've had them; strengthening the international financial regulatory system, where I think there's really been good progress, both through the Bank for International Settlements and, of course, through the Financial Stability Board, handled so capably by Mario Draghi; and modernizing the international financial institutions, again, the governing steps that we're looking forward to in the International Monetary Fund and then down the road also in the World Bank, are all important.

Also discussed were the global financial safety nets, which include new facilities of precautionary lending standby, lending from the IMF, development issues, which are ever with us, and strengthening surveillance of the global economy, which is linked to what is sometimes known as the MAP, the Mutual Assessment Process, which is so heavily underway in the G-20.

Some of the headlines that came out of that summit were that Secretary Geithner ran some trial balloons with the finance ministers to find real indicators for how to trigger enhanced domestic measures. There was some noise coming from both Europe and Asia and thoughtful comments as well about the measures that the U.S. was taking unilaterally. Of course, the quantitative easing and other aspects of concern for developing countries that are commodity producers can have spikes in their indicators. In the end, if you look at the communiqué, there was actually more progress than meets the eye in terms of the headlines because you had bold, provocative comments going into the G-20 and then actually coming out of the G-20 there's a lot of language in that communiqué that says everything but indicators in terms of both the MAP and the surveillance process of the IMF. The leaders agreed that they have to go on cooperating, and I won't take you through all of it. I will say that for Americans, and I suspect for Koreans, and for a lot of onlookers, the stumble that took place on what we call KORUS FTA, the Korea-U.S. Free Trade Agreement, is quite the talk of the town here in Washington. So far no one's yet divined in the public eye why it stumbled: which side decided it? Was it last minute? Were signals misread? As signals being misread on the Korean peninsula go, those of us who go back in history can say that this is a nice little misreading since we haven't gotten ourselves into a war on the peninsula over this one. But certainly, it's a misunderstanding in the annals of the relationship and maybe there will be some discussion of that today.

In any event, I think you'll be listening all day to people with huge insights on this who are really thoughtful scholars, policy leaders, as well as diplomats, who are representing and working on these issues every day. And I hope that you enjoy the conference as much as I know my colleagues have enjoyed putting it together to share with you today.

So now, I have the great pleasure of introducing Tae-Joon Kim. Dr. Kim is the sixth president of the Korea Institute of Finance and he began that just in March 2009. In 1993, he was a professor in the International Management Department of Dongduk Women's University and he served as vice president of that university from 2004 to 2006. In 2007, he was a member of the Public Enterprise Evaluation Group of the Ministry of Planning and Budget. Also in 2007, he served as a standing advisor to the economic subcommittee of the seventeenth Presidential Transition Committee. From 2008 to 2009, he was a nongovernmental member to the National Economic Advisory Council under the president, and after that, he was a member of the Steering Committee of the Korean Investment Corporation. He was also active as an administrator for the amendment to the Bank of Korea Act, while in 2010 he served as a member of the Evaluation Committee of an issue that we've all been engaged with these last few years, which is the financial supervisory service. He earned his bachelor's and master's degrees in economics from Yonsei University, and his Ph.D. also in economics from Columbia University. So let us give a warm welcome to Dr. Kim.

Tae-Joon Kim
President
Korea Institute of Finance

Thank you very much, Jessica. Thank you for your very kind introduction. Distinguished guests and participants, ladies and gentlemen, good morning. On behalf of the Korea Institute of Finance, I would like to welcome all of you to today's timely and valuable seminar entitled, "State of the World Economy, 2011-2012: Whither or Wither?" co-hosted by the U.S.-Korea Institute of SAIS and the Korea Institute of Finance and co-sponsored by SAIS' Asian Studies Program and Korea's premier daily newspaper, *JoongAng Ilbo*.

I would like to extend a special thanks to our special keynote speakers—the former Minister Duck-Koo Chung for the morning keynote and Ambassador Duk-Soo Han for the luncheon keynote. Thank you both for taking time out of your schedule to share with us today your thoughts on the state and future of the world economy. I would also like to acknowledge the session chairs who will facilitate today's conference: Professor Roger Leeds for Session I, Professor Karl Jackson for Session II, and Professor Michael Lampton for the final session. In particular, I really want to express my gratitude to Professor Karl Jackson, Director of Asian Studies here at SAIS. Without his hard work and devotion to this seminar, you could not imagine such a productive and attractive seminar. I would also like to thank Mr. Jun-Hyun Kim and Mr. Kyung-Min Jung of *JoongAng Ilbo*. They had a long trip from Korea and New York, respectively, to connect our discussion to the public in Korea. I would also like to take this opportunity to acknowledge and thank the U.S.-Korea Institute at SAIS and their staff, especially Dr. Jae Ku, Jenny Town, and Jennifer Hill for organizing today's seminar. In this regard, I would like to acknowledge the Korea Institute of Finance staff Dr. Bon-Sung Gu, Dr. Hyoung-Seouk Lim, and Ms. Yumi Cho, and Dr. Min Chang for their efforts to bring all of us together from the Korean side.

I'm particularly pleased to be here with you this morning because this international seminar marks the start of the Korea Institute of Finance's twentieth anniversary celebration. We first opened our doors back in 1991. We are excited to celebrate our twentieth year of providing critical and timely in-depth analysis and research to both the domestic financial industry and the international community. We are also quite pleased to have and to enter into reasonable cooperation with SAIS to welcome issues and projects, such as the seminar we are about to embark on today.

I was fortunate enough to be indirectly involved with and give advice as one of the private sector members of the G-20 preparation committee in the process of setting up the issues of the G-20 Summit we had in Seoul just last week. As a Korean, it was inspiring to see such a huge international event taking place right in my backyard, where important issues, such as exchange problems, international financial organization reform, development issues, and global financial safety nets were discussed, with decisions being made that will have a direct effect on our economy. I anticipate, just as eagerly, hearing your insights today about what might be the impact of the G-20 and the future of the global economy.

Since the outbreak of the global financial crisis two years ago, all of us around the world have been immersed in the recovery process, and for many of us, especially in Asia, we are in fact recovering. However, the potential for a double-dip recession still looms and remains a big concern as to whether the recovery will be sustainable. The recent announcement of the U.S. federal jobs plan to buy an additional six hundred billion dollars in government bonds is yet further evidence to support concerns about sustainability. It is more critical than ever at this moment that we try to get a better sense of where the global economy is heading in the next three years. It is my sincere hope that the U.S.-Korea Institute at SAIS and Korea Institute of Finance have provided a platform for a comprehensive look at various issues that have emerged since the financial crisis to come up with a better outlook for the future.

Today, we will hear from scholars, leaders from both public and private sectors, and experts on issues such as the sustainability of the recovery, the implications of the so-called crunch world, the future of the international monetary system and what the Korean economy should prefer for sustainable development. I am confident that the contributors and the discussants, along with the audience, will engage and challenge each other through lively and interactive discussions. Again, let me welcome all of you and thank you for coming today.

Morning Keynote Address

Restoring Faith in the Economy, Repairing the Global Financial System, and Securing Sustainability for Emerging Economies

Duck-Koo Chung
Chairman
North East Asia Research (NEAR) Foundation

Ladies and gentlemen, distinguished guests. It is my sincere honor to speak to you today. As we move forward after the G-20 Summit, it is critical to gather the latest insights and opinions on the key issues facing the global economy. Therefore, I am delighted to see so many prominent experts and leaders at today's event. I eagerly look forward to learning from your unique perspectives.

This morning I will discuss two of my recent experiences during the last month, one being my lecture trip this past year to Beijing, where I have taught Chinese students international finance at Peking University and at Remin University of China every fall semester since 2003. During this semester, I had a very special gathering with members of Chinese high society, who shared very conflicting views on the future of the world economy and the future of the U.S. and Chinese economies. There were two distinctive streams of thought on the future of the Chinese economy and society, one being a nationalistic view and the other being a progressive view. Both viewpoints worried about the potential threat of social unrest during the next three to five years.

The other experience was during my 80-minute-long phone interview in Beijing with the *New York Times* Tokyo correspondent. He tried to elicit some of my ideas on ways to restore confidence in American economics and any lessons I had learned from Korea's experiences during 1997 to 1999, a time of hard landings, of full-scale restructuring, and of addressing the structural roots of our weaknesses. My responses were negative on those issues. Actually, America is a different country from Korea with different political leadership and parliamentary systems, and a different type of people. Most importantly, unlike the Korean economy, the U.S. economy is the heart of the world economy and the main engine of a big aircraft. He continued to ask me how to overcome this peculiar type of global crisis, to which my answer was that we need more time and a political hero to gain new momentum to move out of the streams headed toward disruption.

On the issues of the future of America and China, I pointed out that America's innovation in DNA would eventually change the current stream of difficulties and weaknesses of the United States. I strongly advised him that we should make a cruel choice of whether to clean up lakebeds first or wait to draw a new stream of water from a nearby river after the lake has become totally dried up.

In terms of the G-20 Summit itself, there was a meaningful display of global coordination and cooperation at last week's summit in my hometown of Seoul. Yet we can still say that the world's major economies continue to act too much in their own interests. The U.S. and other advanced economies can be accused of looking inward, as politics are being tied down by domestic concerns; while in contrast, China and other fast-growing emerging economies can be accused of trying to increase their share of the global economic pie, rather than trying to make the whole pie bigger for everyone.

We have entered an era where China and other emerging markets have joined the already traditionally advanced countries in driving the global economy. This is why it is so critical that we have international economic forums to continue our discussion on the complications that arise from the inevitable differences that exist between them. We cannot let the differences among us keep us apart when we need to get together to overcome the enormous challenges that await us ahead.

Conflicting Views on the Global Economy

Regarding the global economy as it stands today, we need a reform for resolution now, but we do not currently have a common ground for understanding the issues at hand. It will not be easy to reconcile China's and other emerging markets' government-centered approaches to the macroeconomic issues with the more open approach of the United States and other Western countries.

The West would like the world to be a single global market operating under just one set of standards, but that would bring severe growing pains to many still-developing nations with less than adequate market infrastructures. Additionally, that would ultimately translate to severe instability in the global economy. The IMF and World Bank have had their limitations exposed in terms of governing the global economy, and the mantra of "market discipline" has lost credibility due to the problems in the U.S. financial markets, which ended up turning into a global financial and economic crisis. The global economy right now is like a rubber band that has been pulled from both sides for too long. At this point, it is no longer elastic, and one small shock could cause the rubber band to snap. Without deliberate multilateral efforts to ease the current tensions through rebalancing, the pressure will be too much to bear for an already overly stressed global financial system.

Outside of the West, economies such as China, my country of South Korea, India, Brazil, and other nations have been growing rapidly. Yet these economies are not yet mature; although they hold great potential, the entrenched vulnerabilities and lack of requisite market infrastructures for an increasingly open environment imply greater uncertainties going forward. Another issue they face is that their globalization process still in many ways looks like a blank canvas, given a tortuous political agenda and an increasingly important multilateral review process. These countries are used to government intervention; due to immature markets, they cannot let their economies fly on autopilot. Instead, these economies need a social planning body that can navigate their economies manually against significant regulatory headwinds and pestilent tailwinds.

Therefore, advanced economies and large emerging economies are taking very different approaches to securing sustainable growth. Nevertheless, with increasingly interconnected and integrated financial markets, the long-term sustainability of the global economy demands that these approaches be reconciled. Thus, it is no surprise that discussions on global policy are being conducted at the G-20 rather than the G-7, to reflect emerging markets' increasing role. In short, it reflects the growing importance of controlling systemic risks in an increasingly integrated global financial network. With disparate individual financial systems, the integration requires enormous extra efforts to guard against the buildup of systemic risks so that they do not turn into a black swan!

Although the global crisis has calmed from its peak, there remain potential risk factors that present two pivotal challenges for the global economy. First, advanced economies, notably the United States, will need to address their internal and external imbalances to assure that their economies remain sustainable long-term. This is also critically important to maintaining their reserve currency status, if not global financial stability. Second, China and other rapidly growing emerging economies will have to reshape their financial and economic systems to correct the limitations shown by the recent global financial crisis. A paradigm shift toward a more balanced economy cannot be delayed further: serious reforms and social capital investments are urgently called for to revive consumption and strengthen the social safety net. Asia can no longer continue to simply outsource its financial system, which has been the traditional source of global imbalance.

We have seen important progress on both these issues, but not nearly enough. It is true that the United States has reduced its current account deficit from 6% of its GDP in 2007 to less than 4% of its GDP in the second quarter of this year, but the progress toward both internal and external rebalancing has been very slow. The Chinese are rather reluctant to increase their holdings in the treasuries this year, purchasing JGBs and KTBs on a larger scale instead. Unless the United States shows fiscal restraint, funding liquidity via foreign participation will become more difficult in the future. The reserve currency status of the U.S. dollar interferes with its role in achieving rebalancing, but multilateral cooperation headed by Asian countries would have been helpful in easing the pressure on the Fed to adopt a rather risky second round of quantitative easing. On another note, the United States also has attempted to comprehensively reshape its financial market system by passing the Dodd-Frank Act. However, whether these measures alone can restore market confidence and well-functioning markets remains to be seen.

Meanwhile, China and other emerging markets are taking steps to strengthen their economies, but there is still inadequate private-sector leadership to match the government's role. A few structural reforms have been undertaken to move the economy toward a sustainable path, and post-crisis developments have been largely characterized by temporary measures in the form of the extra-loose monetary policy of quantitative easing, rather than deep structural reforms that are necessary for sustainable growth. This necessary rebalancing has not been observed, and there are some concerns that imbalances will get even bigger with all of these policy efforts to sustain the recovery. It is the result of trying to keep a boat afloat without fixing its gaping holes.

In an ever more interconnected global economy, both advanced and emerging market issues will need to be discussed at the same time. For the West, this involves repairing its traditional way of doing things. This means addressing the heavy reliance on debt and making the social safety net more reliable and sustainable while also repairing the fundamental malfunctions in its economic and financial market governance structure. In short, the United States especially needs to save more and export more to get out of the "Triffin Dilemma." For this to happen, surplus countries in Asia need to be more flexible in allowing their currencies to appreciate further. To ease the tension on China, coordinated efforts by Asian economies can be effective to avoid the lengthy, painful, and speculative adjustment process toward a new equilibrium.

In East Asia and elsewhere, the key issue is how to make strong growth synonymous with sustainable growth. Such markets still do not have the fundamental conditions for becoming mature economies. They will therefore need to tackle the resource-level and societal-level limitations to achieving sustainable growth. So, as the new order emerges, we need to address both the factors limiting emerging markets and the weak points in advanced economies' growth models simultaneously.

Given the extended discussions among experts on the United States and other core vehicle currency countries, I would like to shift your attention to China, which has to be one of the subjects at the center of discussions on emerging markets and forming the new global economic order. China has become heavily relied upon as the engine for global growth, but its growth path and its role in the coming economic order are far from guaranteed. Right now, we have a country with a rapidly growing GDP, a country with robust exports helped by an undervalued currency, a country with a booming property market, and a country that some experts believe will overtake the U.S. economy in less than twenty years. Yet despite these successes, this is also a perfect description of Japan in the 1980s, right before one "lost decade" has become two "lost decades." For China's rise to be both sustainable and beneficial for the rest of the world, it must not fall into the same trap. In light of this, Chinese resistance toward a more open economy is well understood.

Fundamentally, China has fallen into a macroeconomic "trilemma." If it does not act, this will severely limit its growth long-term. In this context, China announced in its Twelfth Five-Year Plan that it intends to stimulate domestic demand, build up its social safety net, and restructure the financial and real estate markets. These measures are to be welcomed as they would do much to rebalance global demand and help China remain a sustainable growth engine for the global economy.

The Four Key Bridges China Has to Cross

In this section, I shall further address China's global growth through a discussion of what I propose as the four key bridges China, along with most other rapidly growing emerging markets, will have to cross to secure a sustainable economy and assume a new role in the coming new global economic order. First, China will have to focus not only on building material wealth, but also on building social capital. Second, the Chinese government will have to let the market and civil society play a bigger role in allocating resources. Third, China must modernize its financial sector if it is to support an increasingly sophisticated sector. And fourth, China needs to show greater leadership in the international community to help steer the world away from protectionism and nationalism.

Building Social Capital

The first step in this process is that China must build social capital. China has been enormously successful at utilizing its physical and human resources to generate material wealth, but to fit in with the global economy and move to the next development stage, it must build the social capital necessary for a post-industrial knowledge-based society. This would be a better way to utilize its abundant human resources. This means emphasizing the rule of law, social trust, corporate and government transparency, and intellectual property rights. Only through addressing such vulnerable areas can China tackle its problems with corruption, social unrest, rural unemployment, and income inequality, among others.

In terms of social capital, China will also have to invest more in its social safety net. This will of course help in promoting social cohesion, or what Beijing has described as a "harmonious society," and it will be the right response to help overcome the "Four Un-s"—namely "*unstable, unbalanced, uncoordinated, and unsustainable"*—described by Premier Wen Jiabao in a press conference following the National People's Congress on March 16, 2007. But a strong social safety net also has another benefit. It will make its citizens feel they are freer to spend the money they earn, rather than save it excessively. This increase in consumption will serve as a growth driver both for China's private sector and for global companies eager to win Chinese consumers.

Less Central Control of Economy and Society

Secondly, China needs to cross the second bridge, one that focuses on less central control over the economy and society for a more balanced social governance structure. Helping the Chinese consumers in this manner also relates to the second bridge China must cross, which is to become less dependent on government controls, and more reliant on market and civil society mechanisms. Decisions on economic and other issues will need to be more responsive to citizens and less dependent on Beijing. Alhough the existing governance structure has worked well for China's rapid, capital-intensive growth phase, China will have to develop a more open and predictable mechanism for making key decisions on tackling the complex challenges facing Chinese society.

In terms of the economy, too much of China's growth is being captured by state enterprises and channeled into real estate and other nonproductive assets or capital-intensive infrastructure projects. To combat this problem, government authorities will need to allow a more market-driven private sector, which will create a more dynamic economy that balances capital spending, manufacturing, and service industry growth. This, in turn, will create many jobs, contribute to greener growth, and invigorate the Chinese consumers. If China continues to stick to its old paradigm, jobless growth would not be surprising, with the labor-saving capital-intensive growth strategy and the depressed service industry.

Financial Innovation

This type of fundamental structural change must be supported by change in the financial sector. This comes to the third bridge that we must encourage China to cross, which deals with the development of more sophisticated, innovative, and open financial markets. The global financial crisis exposed how financial sectors in many advanced economies became too large and risky. We are now seeing a move toward stricter regulation and supervision of financial institutions, and I think most of us would agree that some movement in this direction is necessary. In China and much of Asia, however, the financial sector is still far behind global standards, and governments still interfere with the financial markets too much. China must bring its financial markets closer to the global model to meet the demands of a twenty-first-century economy. It need not do so by blindly adopting global standards, but instead, should establish standards better suited to its local settings, without violating basic tenets, and with soundly operating market disciplines.

Over the past 30 years, China has built a remarkable manufacturing base on top of a cautious and relatively unsophisticated financial sector, which was under heavy government control. But as China and similar economies mature, they will need a much more flexible financial sector so that they do not fall into the middle-income trap. Beijing has understandably been slow to relax control over the financial sector, and over exchange rates. Its financial markets and currency are still very fragile.

In this respect, we should mention currency reserves. China and other Asian economies still sit on mountains of foreign reserves as a way of ensuring stable foreign exchange and financial markets, but it is very expensive for the domestic economy, and not sustainable long-term for the global economy. China and the global community therefore need to work on alternative ways of securing stability besides putting massive amounts of dollars under the mattress. In this respect, China needs to continue to promote the wider use of a new reserve currency, notably SDRs and a substitution account at the IMF. Also, a new reserve currency in the form of a regional currency unit (RCU) will be sought after in the intermediate run. That is one key step to get China and other economies away from stockpiling foreign reserves and towards the more market-driven exchange rates and capital flows that Western leaders have been calling for.

Leadership Rather Than Influence in the International Community

This brings me to the fourth, and final, major bridge China will have to cross, which involves showing greater leadership in the international community. Present tensions over monetary and trade policies are a perfect opportunity for China to show that it can be a responsible leader in the new economic order. This will mean not allowing such disputes to fall into nationalism, counterproductive rhetoric, and blame games. No country stands to benefit from conflict between China and other countries on economic or other policy issues.

It is true that China's interests and other countries' interests do sometimes clash. Yet we all know that China will be a key engine of the future global economy and a key in whether the world can peacefully coexist. Therefore, we all have an interest in China maturely taking on the responsibilities of a global power. For this to happen, China will have to face the demands, responsibilities, and sacrifices that come with being a true global power. China is expected to play the role of a global leader by approaching formidable issues such as exchange rate conflicts and the like in a multilateral manner to seek national interests within the context of improving the welfare of everyone.

Conclusion

To conclude, the new global economic order requires that three pivotal, yet very different issues be addressed for sustainable and coordinated global growth: restoring faith in the economy, repairing the global financial system, and securing sustainability for emerging economies. Political leaders, presidents, and prime ministers of the G-20 have been too inwardly focused, and worried about criticism from domestic citizens. Perhaps we need a certain type of hero to overcome the current situation right now.

We must now adamantly adhere to a multilateral approach to meet the serious challenges we face. Even though discussions seem to revolve around the G-20 for the time being, other countries need to be more actively involved in this adjustment process. We are indefinitely seeking "multilateral efforts" to resolve the unprecedented global financial crisis. By construction and definition, coordination would be difficult in a multilateral setting, but a coordinated solution is a better way to control systemic risks in this integrated network environment. If we are not able to come to a solution, we are all back to a protectionist movement with a significant reduction in the welfare of everyone.

This is the single most important reason that the G-20 is such an important step toward resolving the issues we face now. To fix system-level problems, we need a system-level approach, and therefore multilateral efforts will remain the key to any effective outcome. Even the seemingly visible bilateral issues such as the exchange rate need to be cast in a multilateral framework, which will call for unprecedented cooperation before we expect any real progress.

In conclusion, the four key bridges that China must cross are also issues that apply to many other rapidly growing emerging markets. It is in the interests of the entire global community to address the vulnerabilities of emerging economies since they will be the drivers of the majority of global growth for the near future. Of course, in an interconnected global economy, any discussions about China and sustainability should be accompanied by discussions about the challenges advanced economies must face as well. This means getting the traditional economic powers healthy again by attaining much-needed rebalancing, as well as addressing flaws in their financial and economic systems. Advanced economies must tackle their own internal imbalances and governance malfunctions, and avoid acting only in their own interests. This is vital to avoiding any serious systemic repercussions from the derailed global financial system that hinges on key reserve currencies. As we saw at the past G-20 summits in Washington, D.C., and London, a coordinated action plan is what will really set the global economy on a sustainable development path.

With genuine efforts towards coordination by advanced economies, as well as by China and other emerging economies, I am confident that the new global economic order will serve as a rising tide that lifts all boats. However, do not forget that we are all on the same boat but with different dreams!

Thank you very much for your attention.

Luncheon Keynote Address

State of the World Economy, 2011-2012

Duk-Soo Han
Ambassador to the United States
Republic of Korea

Good afternoon. First of all, I want to commend the staff here at SAIS as well as the Korea Institute of Finance for conceiving and arranging this very timely event. The U.S.-Korea Institute at SAIS, led by Dr. Ku, is the heart of Korean scholarship in Washington and has contributed a lot to Americans' understanding of Korea and U.S.-Korean relations.

I'd like to talk about three interrelated things today: the importance of free trade to global economic growth and prosperity; ongoing efforts to strengthen economic corporation within and among geographic regions; and the status of the Korea-U.S. Free Trade Agreement.

Free trade is one of the most passionately debated issues in public discourse. It is also one of the least understood. I understand the concerns that free trade detractors have, particularly now with countries struggling to recover from a severe global recession and U.S. unemployment similarly stuck at close to 10%. I acknowledge that exposing industry to foreign competition by opening a national market to imports can cause some short-term economic pain, but the severity and duration of that pain depends on how quickly and efficiently the government adjusts to the change. Some governments are better at this than others. The evidence is abundantly clear that the disadvantages free trade causes to a country's economy are small compared to the advantages. Contrary to what you might hear about NAFTA, it has steadily increased the GDPs of at least three member countries since it took effect 16 years ago. U.S. employment increased 24% from 110 million to 138 million between 1993 and 2007. The U.S. unemployment rate during that period averaged 5.1%. It averaged 7.1% during the preceding 13 years. U.S. manufacturing output rose by 58% between 1993 and 2006 as compared to 42% between 1980 and 1993. Manufacturing exports in 2007 reached an all-time high with a value of $982 billion.

We know that free trade spurs economic growth in every country that engages in it. This is because every country has products, commodities, or services that it can produce more efficiently and inexpensively than some other country or countries. The economic principle of comparative advantage holds that that country should focus on trading those products, commodities, or services for something that another country is better at producing. Kuwait is rich in petroleum, but can't produce much of its own food. The United States has to import most of its petroleum, but has the world's most productive farmers. Free trade between them would ensure that both countries capitalize on what they do best and grow their economies as a result. This is economic theory at its most basic, but it took a long time for some to learn it.

During the Great Depression, the United States and other countries erected trade barriers to protect their domestic industries from competition. Economists and historians differ on whether this worsened the Depression, but all agree that it didn't make things any better. After World War II, the United States brought developed countries together to start breaking down those barriers under the direction of the General Agreements on Tariffs and Trade or GATT, which was formed in 1949. From that year onward, global trade has grown by more than 900% and global GDP by more than 500%. When the global financial crisis struck in 2008 and the terrible recession ensued, some governments were pressured by their domestic industries to turn to protectionism. Fortunately though, world leaders remembered the lessons of the twentieth century and resisted that pressure. They agreed not only to refrain from erecting trade barriers, but knock down existing ones and to look to foreign markets as potential sources of economic growth.

President Obama saw the value of this strategy and acted on it with the creation this year of the National Export Initiative. His goal is to double U.S. exports in the next five years and create or support two million jobs. Part of the administration's strategy for achieving those goals is to work aggressively at getting trade partners and potential trading partners to remove their trade barriers so that American industries can reap the benefits of free trade. By boosting economic growth, free trade contributes to job growth. Between 1994, when NAFTA took effect, and 1998, 1.3 million jobs were created in the United States. Today about 12 million Americans owe their jobs to export directly and those jobs tend to pay better and offer more security than other jobs. The E.U. estimates that since consolidation into the single market in 1993, employment in the 27-country bloc has increased by as many as 900,000 jobs, mostly because of trade within the E.U. On the other hand, protection not only fails to create jobs, it fails to protect existing ones. U.S. trade barriers erected in the 1980s to protect auto industry jobs by restricting imports from Japan had the opposite effect: American car prices increased by 41% during a four-year period. That led to a drop in new car sales of about one million units, and that lead in turn to job losses in the auto industry.

Free trade lowers consumer prices and thus lowers the cost of living. When a government erects trade barriers to protect an agricultural sector from foreign competition, the cost of food goes up. The United States imposes a tariff on imported sugar of roughly 34% per kilogram; without that, tariff consumers would pay about three billion dollars less per year for sugar. Free trade raises national and personal incomes. The WTO estimates that cutting trade barriers to agriculture, goods, and services by one-third would pump $613 billion into the global economy. That is roughly equivalent to the economy of Canada. Some of the new money flowing into a nation's economy can be used to lessen the effects of job dislocation or to help companies and workers adapt to the new environment.

Today, some countries are experiencing rapid economic growth. Most of them are in Asia, which is the world's most dynamic economic region. Asia realized economic growth of 3.4% in 2009 and it is projected to see growth of 7.1% this year and next. Compare that to the E.U., where economic growth was -4.1% in 2009 and is projected to be -1.7% in 2010 and -1.5 % in 2011; or to the United States where the comparable percentage is -2.6% this year and -2.3% next year. If the United States can open those Asian markets through reciprocal lowering of trade barriers, its economic growth will accelerate and employment will increase.

There are several avenues that the U.S. can take to achieve this goal. President Obama has already announced his intention to engage economically with a Trans-Pacific Partnership and, of course, to ratify the Korea-U.S. Free Trade Agreement, which was concluded three years ago. APEC's Free Trade Area of the Asia Pacific, which is still in its formative stages, may present another opportunity for the United States to engage in the region. By doing so, the U.S. would assure Asian governments of its intention to reclaim its leadership role in global trade. They would welcome that message.

The fact is that bilateral and multilateral trade agreements have been sprouting like weeds since the 1990s in part because the WTO has so far been unable to finish the Doha Development Round that started in 2001. This delay in crafting a comprehensive set of rules for global trade has let WTO members strike out on their own and negotiate bilateral and multilateral trade agreements with one another. As of the end of July there were about 425 trade agreements in effect. And there are many more on the way; Mongolia is the only one of the WTO's 153 members without any sort of external trade agreement. Each of these agreements gives the parties to it unrestricted access to one another's markets for goods and services. No parties to the agreements find the access to those markets diminished. Of the roughly 425 FTAs in effect, about 150 are regional agreements such as NAFTA and the China–ASEAN Free Trade Area, which came into effect in January 2010. It is the world's largest free trade area composed of developing countries.

Tariffs in the China-ASEAN Free Trade Area are now averaging less than 2%. Trade within the region has grown explosively. China needs the primary commodities and natural resources that some ASEAN countries produce and ASEAN countries need the manufactured products that China produces. Consequently, trade between China and ASEAN grew from $20 billion in 1995, to $223 billion in 2008. ASEAN has a trade surplus with China. Given the obvious and undeniable benefits that come from free trade, it is easy to understand why Australia and New Zealand negotiated FTAs with us; why the United States, Australia, Malaysia, Peru and Vietnam are trying to join the Trans-Pacific Partnership; and why Korea has aggressively pursued bilateral and multilateral FTAs with dozens of countries during the last few years.

Today, Korea has five FTAs in force with 16 countries. It has signed three FTAs with 29 countries: the United States, the European Union, and Peru. There are FTAs in negotiation with 12 additional countries including Mexico, Canada, and Australia. And we don't intend to stop with those. Korea is considering negotiating eight more FTAs with 14 countries, including China and Japan. Since NAFTA, the U.S. has entered into free trade agreements with 15 other countries. I submit that now is the time for the United States to engage more fully in Asia and that ratifying the Korea-U.S. Free Trade Agreement is the way to start.

As you know we had hoped to resolve lingering concerns about the Korea-U.S. FTA before the Seoul G-20 Summit of last week. We didn't quite make it, but we are in the final stage of our bilateral discussions. I fully expect that we will come to terms very soon so that President Obama can present the finished agreement to Congress early next year. Why am I so optimistic? I have attended three summits that Presidents Lee and Obama have held in Seoul in November 2009, in Toronto in June 2010, and last week in Seoul. I have seen their friendship and mutual respect grow at each meeting. The discussions about the issues of concern to the United States were very difficult, but progress was made. If not for the trust and respect that our two presidents have for each other, I'm not sure that I could say that. The benefits to the U.S. economy that would result from the ratification of the Korea-U.S. FTA are many and undeniable. The agreements will increase economic growth, create jobs, and strengthen the long-standing U.S.-Korea alliance. The United States International Trade Commission predicts that the KORUS FTA will increase U.S. GDP by $12 billion and U.S. exports by $11 billion. Other government analyses have found that the agreement will create tens of thousands of jobs in manufacturing and agriculture.

It is widely believed in this country that the United States has a large trade deficit with Korea. In reality, the deficit in goods and services is an almost negligible $421 million at the end of June this year. That is only 0.7% of the total trade volume of $55 billion between the United States and Korea. If you consider the U.S. trade deficits with other developed countries such as $150 billion with China, $18 billion with Japan and $18 billion with Germany in the first half of this year, you get a better view of how balanced the Korea-U.S. trade relationship is. It is also worth mentioning that Korean companies invest more here in the U.S. than U.S. companies invest in Korea: $6.3 billion compared to $1.3 billion in 2008. Even in 2009, in the midst of a severe recession, Korean investment in the United States was more than $4 billion, while U.S. investment was only $1.5 billion. This cross-border investment has created tens of thousands of jobs in the United States. The trade balance numbers do not account for spending by Korean tourists in the United States, which exceeds $2 billion every year, or by the 75,000 Korean college students here.

East Asian countries are actively engaged in discussions about economic integration. ASEAN has been formed and a Korea-Japan-China Free Trade Agreement is under consideration. There are also the ASEAN+3 FTA and ASEAN+6 including India, Australia, and New Zealand. The United States should have a bridge to these increasingly integrated East Asian economies. The KORUS FTA will provide it. The KORUS FTA will also strengthen the strategic partnership that the United States and Korea have maintained since 1950 when the Korean War started. It will send a message throughout the region that the United States intends to stay firmly planted economically and politically in East Asia.

Free trade agreements often have political benefits as well as economic ones. The United States entered into FTAs with Israel and Jordan in part to reaffirm its support for those countries and to strengthen relations with them. The KORUS FTA will be a transpacific bridge that countless American industries can cross with goods and services in a rapidly growing economy that is the world's fifteenth and Asia's fourth largest. It will open the door to more trade agreements between the United States and other Asian countries. The KORUS FTA promises benefits to every industry in the United States that chooses to reach for them, including the industries that oppose it. As President Obama said, "Ratifying the KORUS FTA is the right thing to do for our country. It is the right thing to do for Korea. It will strengthen our commercial ties, create enormous potential economic benefits, and create jobs here in the United States, which is my number one priority." Senator Joe Lieberman wrote in an op-ed that appeared in Tuesday's *Wall Street Journal*: "Old allies and new friends in Asia are looking to Washington for strong principal leadership in the face of an assertive China. That will require a forward-looking, optimistic trade strategy. Such a strategy will be well-received by countries that worry about America's interests in maintaining its influence in that part of the world. It will not be well-received by the one country in the region that wishes the Americans would go away, North Korea."

I will conclude by saying that free trade is spreading around the world and the effects have been almost entirely positive. Every country has to make a choice, to jump on the train or stand aside and let it go by. Korea has made its choice. Exports are the principal driver of its economy, so the more free trade agreements it can negotiate, the more prosperous it'll be. This is true not just of Korea, but of almost every country on earth.

I'd like to give thanks again to SAIS and the U.S.-Korea Institute for inviting me to be a participant in this conference; and to thank you all for listening.

Conference Papers

The State of the World Economy, 2011–12: An Overview

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The collapse in world trade and output that took place during late 2008 and early 2009 was terrifying. By the spring of 2009, it had taken on proportions that invited comparisons with the most devastating economic crisis of the twentieth century, the Great Depression. To be sure, the experience in individual countries was not always as bad: "Half a Great Depression" (which was, of course, bad enough) is how Paul Krugman described the U.S. experience in a widely cited comment (2009). But once one stood back and took a global view, the comparison with the Great Depression was not a fanciful one.

Figure 1 is an updated version of a chart that first appeared in April 2009 (Eichengreen and O'Rourke 2009). It plots movements in world industrial output from their respective global peaks, in June 1929 and April 2008. As can be seen, as of early 2009 the two indices were declining at a comparable rate; the pressing question was to know whether global policy responses would be sufficient to halt the decline.

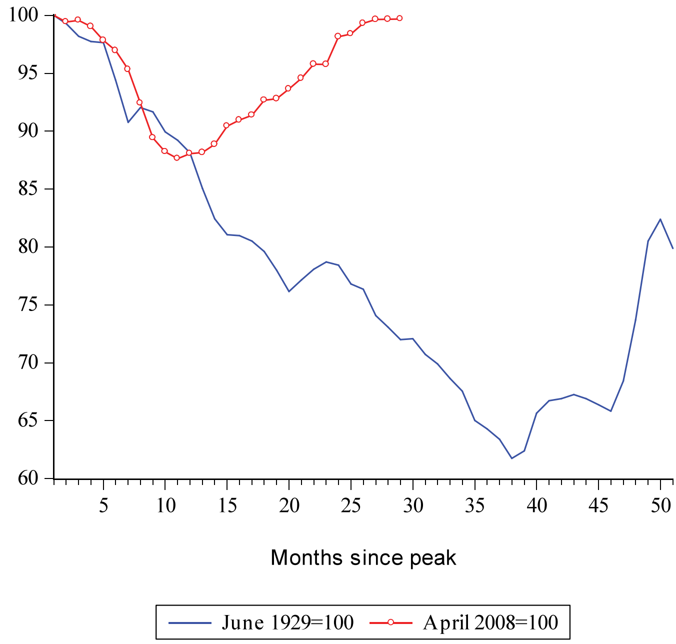
As figure 1 shows, the answer to this question is in the affirmative. Whereas global industrial output continued to decline for three years after 1929, it was bottoming out by late spring 2009, just a year after the crisis had started. At the trough, output had fallen by about 12% relative to the April 2008 peak. By August 2010, the latest month for which data were available at the time of writing, industrial output had recovered to its pre-crisis level. The figure shows, however, that the speed of recovery has decelerated in recent months.

What was true for industrial production was true for international equity markets as well. Figure 2 shows that world stock markets fell much more rapidly after April 2008 than they did after June 1929, the Wall Street Crash notwithstanding. By February 2009, they had declined by slightly more than 50%. The recovery was equally dramatic, as can be seen, although there was a severe setback in late spring 2010, and world equity markets remained 19% below peak in October 2010.

One of the defining features of the Great Depression is the collapse in world trade after 1929, with the Smoot-Hawley tariff serving as the symbol of the rise in protectionism, and the breakdown of the multilateral trading system of the period. And so it was alarming to see world trade volumes declining at an even faster rate during the present crisis that they had done 80 years previously (figure 3). They fell by 20% in less than a year, an "accomplishment" that it took almost three years to achieve after 1929. Once again, the recovery was rapid, and world trade was less than 2% below its peak value in August 2010.

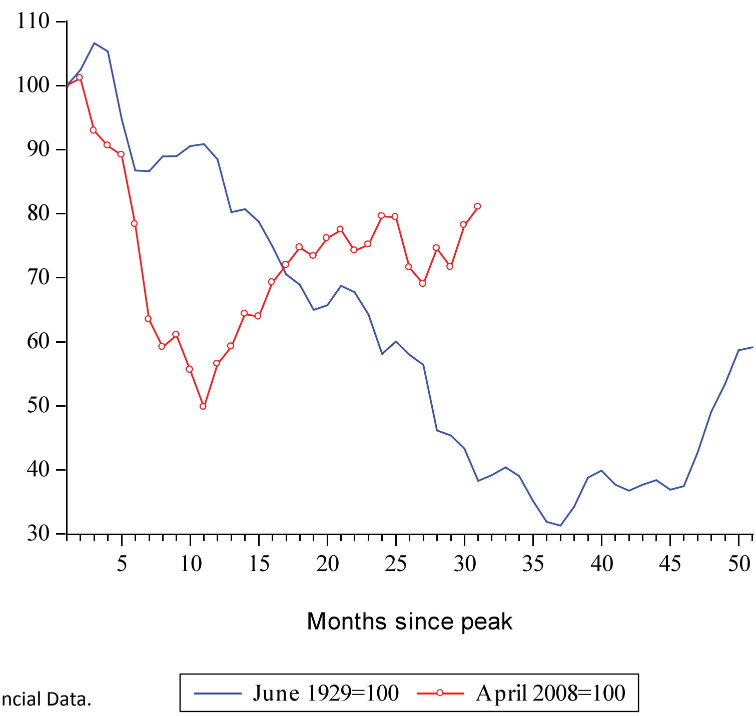
* Presented at the State of the World Economy, 2011–2012: Whither or Wither? Workshop, SAIS, Washington, D.C., November 18, 2010. I am grateful to Barry Eichengreen, Alan Taylor, and conference participants for many useful comments. The usual disclaimer applies.

Figure 1. World industrial output during two global crises



Source: Data graciously provided by the IMF, and Wagenführ 1933, *Vierteljahrshefte zur Konjunkturforschung* (various issues), *Statistik des In-und Auslands* (various issues).

Figure 2. World equity markets during two crises

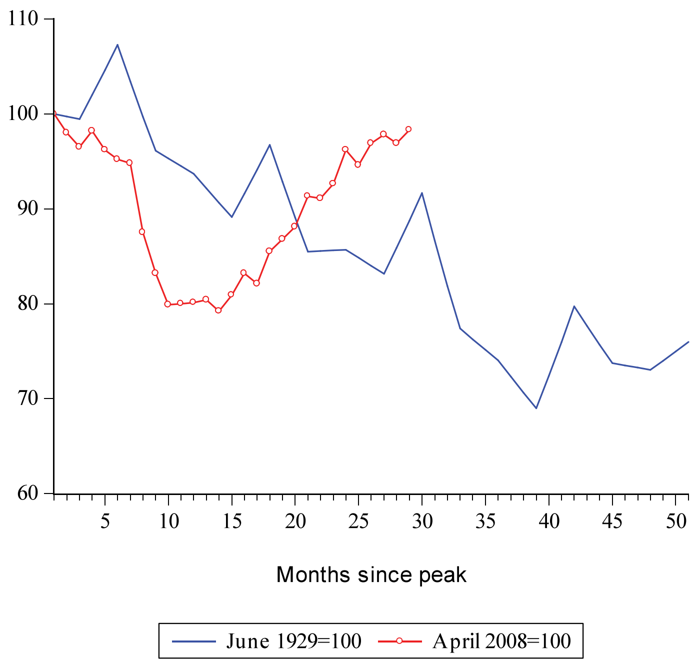


Source: Global Financial Data.

The reasons for the speed of this decline, and the apparent increase in the elasticity of trade to output that it implied, have been the source of considerable debate among trade specialists. One big difference from the situation 80 years ago is that the share of manufactures in world trade, which had been just 44% in 1929, was 70% in 2007. This matters, since manufacturing output is far more volatile than primary production. Eighty years ago, output in the developing world remained relatively stable during the crisis, since the developing world was for the most part specialized in primary production of one sort or another. It was in the industrialized economies of Europe and North America that output collapsed; the depression was transmitted to the developing world via a decline in their terms of trade. Since the 1960s, however, industry has spread across the globe; the decline in output was global; and the decline in world trade was correspondingly dramatic. There have also been compositional shifts within manufacturing trade: expensive consumer goods whose purchases can be easily postponed are much more important components of world trade nowadays, while cross-border flows of intermediate products helped to ensure that the decline in world trade and world output after 2008 was highly synchronized (Baldwin 2009). Of course, as the world economy recovered in 2009 and 2010, world trade recovered in a rapid and synchronized manner as well.

What figures 1–3 suggest is that, while the shock that hit the world economy was indeed a Great Depression–sized shock, the world has managed to escape a second Great Depression. Why did it do so? Eichengreen and O'Rourke (2009) and Almunia *et al.* (2010) argue that it was the different policy responses by finance ministries and central banks that made the difference. In the interwar period, respectable people signaled their adherence to economic orthodoxy

Figure 3. World trade during two crises

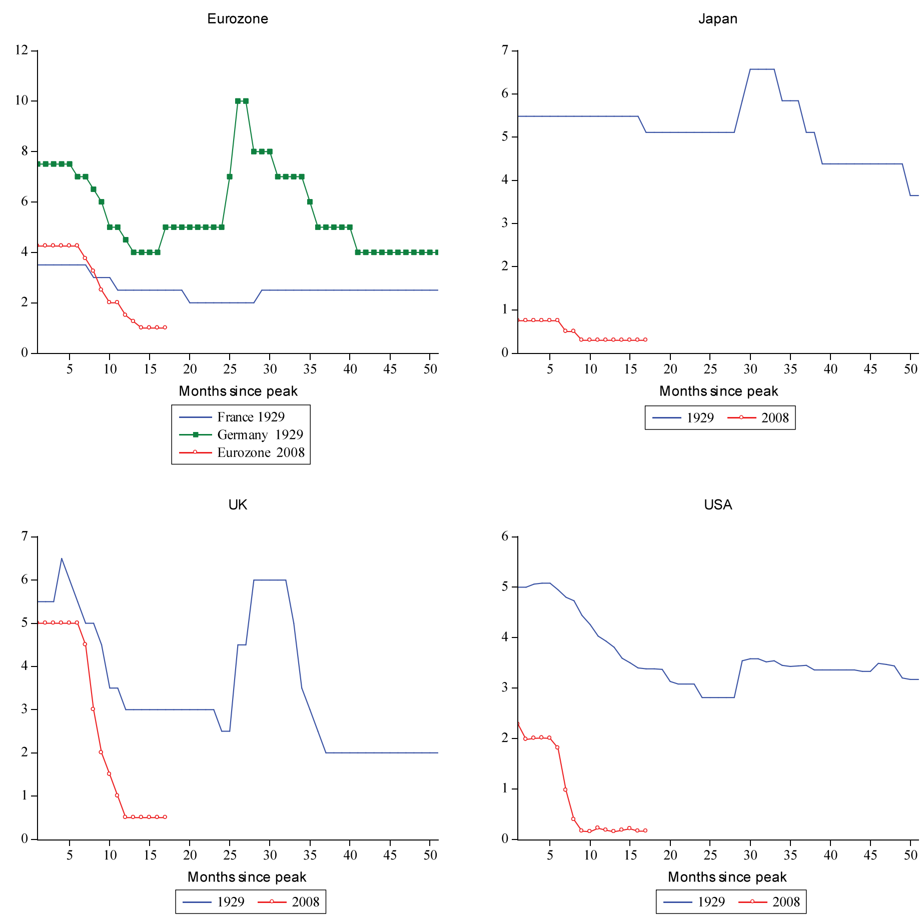


Source: *League of Nations Bulletin of Monthly Statistics* and http://www.cpb.nl/eng/research/sector2/data/trademonitor.html.

and a liberal international trading system by supporting the gold standard. This not only—by definition—made it impossible to respond to a serious economic downturn with expansionary monetary policy; it also made governments reluctant to adopt reflationary fiscal policies, since this could worsen the trade balance and lead to a drain of gold reserves. It was only when governments abandoned the gold standard that they regained the policy flexibility required to respond to the crisis and that their economies started to recover (Temin 1989, Eichengreen 1992). Up until that moment, they pursued perverse policies, tightening fiscal policy to try to keep deficits from increasing and raising interest rates so as to try to stave off outflows of gold. These perverse policy responses are ultimately what turned a severe recession into the Great Depression.

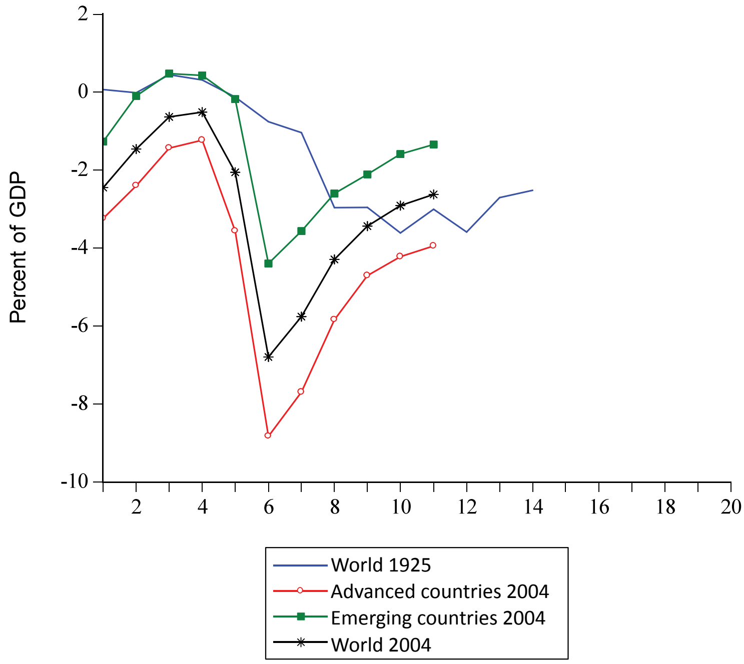
Policy makers have learned from these mistakes. Figure 4 shows the sharp contrast between the interest-rate policies pursued during the two crises. Figure 5 shows that while government budget deficits increased during both crises, they increased by a lot more after 2008 than after

Figure 4. Discount rates during two crises



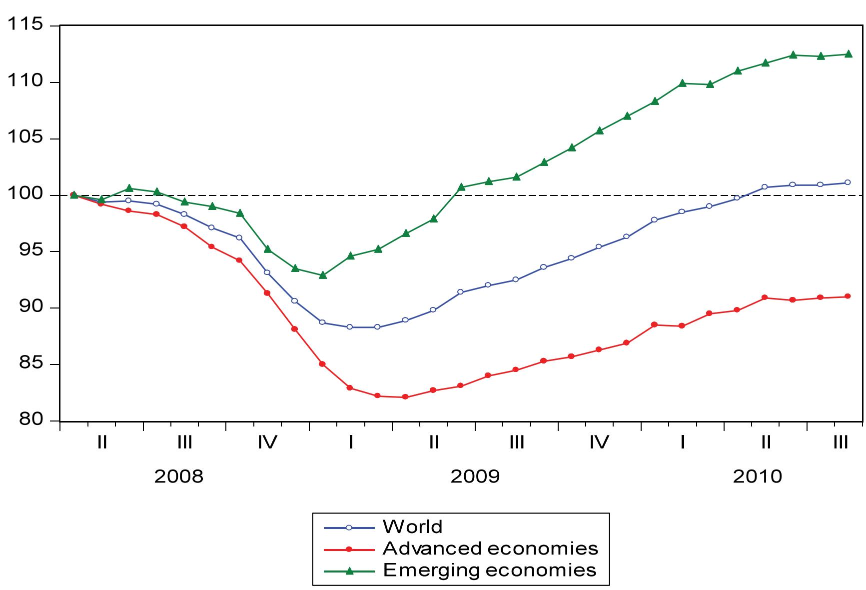
Source: Almunia *et al.* 2010.

Figure 5. Government budget deficits during two crises



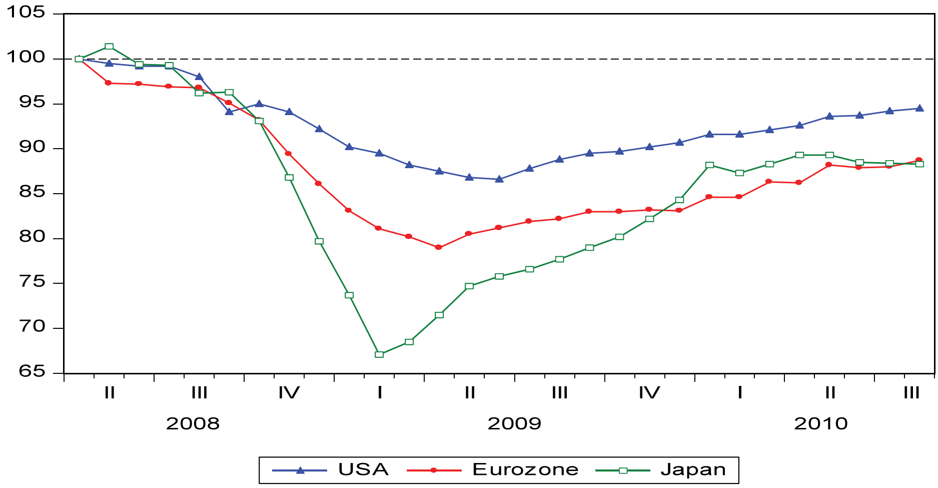
Source: Almunia *et al.* 2010.

Figure 6. Industrial output, 2008–10



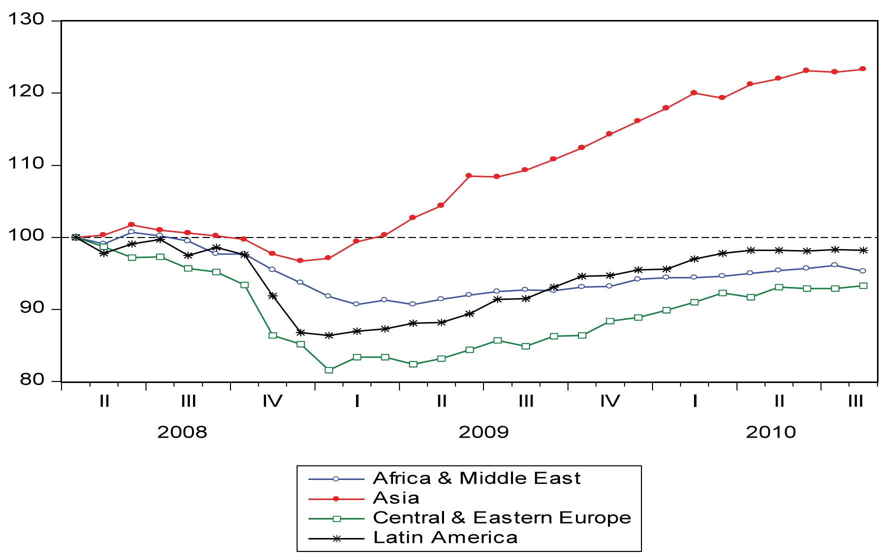
Source: CPB.

Figure 7. Industrial output, 2008–10: advanced economies



Source: CPB.

Figure 8. Industrial output, 2008–10: emerging economies



Source: CPB.

1929, especially in advanced economies. This reflects the greater willingness of governments today to allow automatic stabilizers to operate, as well as a certain amount of discretionary fiscal stimulus in various countries. The net impact has been a Great Recession rather than a Great Depression, and a recovery that was impressive, at least in late 2009.

This recovery was driven by events in the emerging economies, rather than by the advanced economies. The IMF (2010) is currently forecasting a growth rate of 2.7% for the advanced economies, slowing to 2.2% in 2011, which is disappointing given the 3.2% contraction experienced in 2009. By contrast, the forecast for emerging economy growth is 7.1% in 2010, slowing to 6.4% in 2011. Figure 6 shows that while emerging economy industrial output is now more than 10% above the previous peak level of production, advanced economy production is still more than 10% below peak. Within the advanced economies, the United States experienced a relatively shallow decline, and a relatively shallow recovery, outperforming both the Eurozone and Japan, whose industrial output fell by more than 30%. The Japanese recovery was equally steep, before it fizzled out in 2010 (figure 7). Within the emerging economies, industrial output performance has been strongest in Asia (figure 8), although when the focus is on GDP growth rather than industrial output growth, Latin America and sub-Saharan Africa have both been bright spots.

The Immediate Outlook

Although the recovery from the Great Recession has been impressive when compared to the experience of the 1930s, it is important to note that it has been losing momentum throughout 2010. The Netherlands Bureau for Economic Policy Analysis, on whose data I am relying in figures 3, 6, 7, and 8, has been tracking this decline in momentum since the start of the year (figures 9 and 10). Momentum is defined as the growth rate between successive three-month periods; it has been declining since January for both industrial production and trade (figure 9). Alarmingly, the decline has been greatest for industrial production in the emerging economies—alarming, since as we have seen, the recovery has been strongest there (figure 10).

The OECD's composite leading indicators also suggest some causes for concern in the immediate future (OECD 2010). To be sure, they suggest expansion in the United States, Japan, and Germany, as well as the OECD as a whole, and Russia; but they also suggest that a slowdown may be in the offing in Brazil and China, as well as a downturn in India, France, Italy, and the UK. And as we have already seen, the IMF is forecasting that world growth will slow in 2011, with the major risks according to them being to the downside.

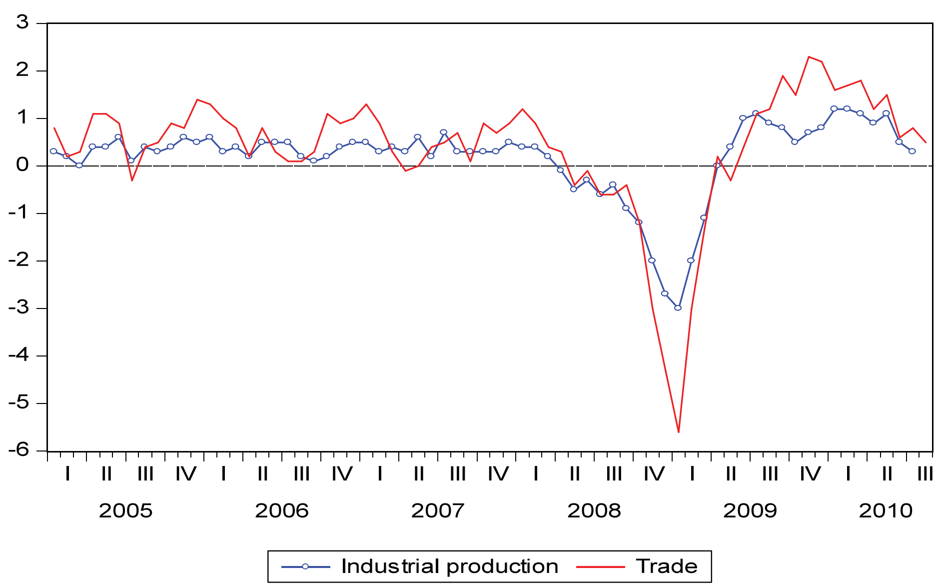
There are several good reasons why we would expect growth in the advanced economies to be restrained in the immediate future, despite the size of the recession in 2008–9 (IMF 2010). The first is that a reasonably large share of the recovery in the United States and Europe can be accounted for by inventory rebuilding. The most recent data for U.S. GDP indicate that the economy grew at an annualized rate of 2.5% in the third quarter of 2010, but that just over half of this growth (1.3%) can be accounted for by an increase in business inventories. By definition, this is not a long-run source of growth.

The second reason is that the fiscal stimuli of 2009 are being replaced by a switch to austerity across the advanced economies—not just in economies such as Greece and Ireland, which are excluded from the capital markets, but in countries such as Germany, which are still able to borrow at low rates. Crucially, in the Eurozone periphery this austerity cannot be accompanied by nominal devaluations, which would in normal circumstances have cushioned the blow to output by helping these countries to price themselves back into foreign and domestic markets. Austerity in the core countries will further depress growth in the PIIGS, and make eventual default there more likely.

The third reason is that several forces will continue to constrain household consumption in the immediate future. First, while households have been busily deleveraging in such heavily indebted economies as the United States, the UK, and Ireland, the process is not yet complete. Second, on the other side of household balance sheets, house prices have been sliding across the OECD. In the two most important countries where it seemed that a bottom might have been reached—the UK and the United States—there are now fears of a double dip, with the double dip apparently well underway in Britain. Third, unemployment is directly constraining the expenditure of affected families, and is creating new mortgage-related holes in banks.

A fourth reason is, of course, the banking problems that persist in Europe, and the associated turmoil that this is provoking in financial markets. The failure of the European authorities to come clean about the scale of the problems in their banking sector is not only preventing the resolution of these problems, hence depressing lending and economic activity; it is adding to the general sense of uncertainty haunting financial markets. In the Irish case, an ill-considered blanket guarantee of bank liabilities, combined with continuing uncertainty

Figure 9. Momentum in world industrial output and trade

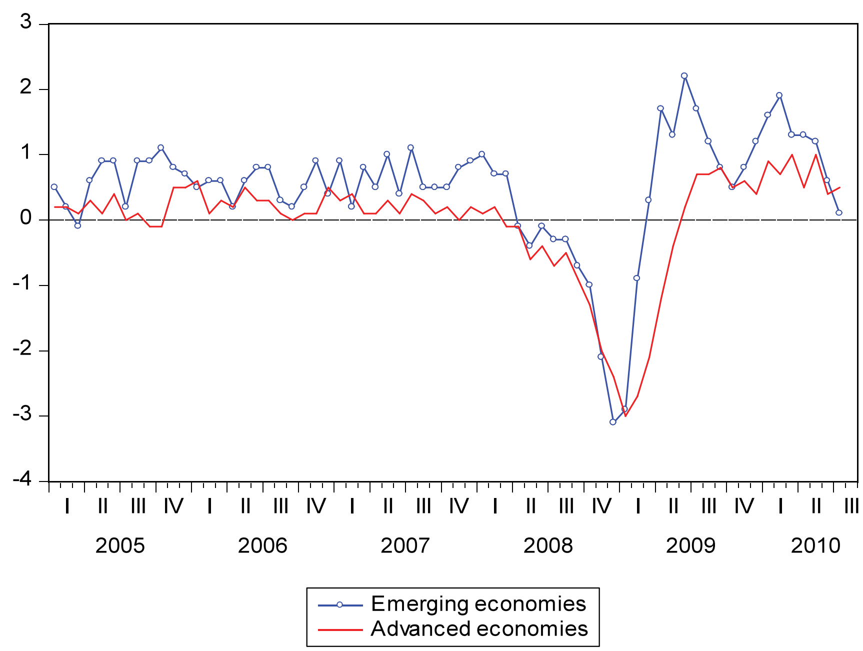


Source: CPB.

about the scale of bank losses, has pushed the country into the hands of the EFSF and IMF as fears about the country's solvency grow. Unfortunately, the proposed "rescue plan" for Ireland, which is nothing of the sort, is only going to delay the inevitable restructuring of Irish debts, at the cost of considerable expense and hardship for ordinary people. A far better solution would be to restructure bank-related Irish debts, and if this causes problems elsewhere, to restructure there as well. Trying to fix solvency problems by assuming that they are liquidity problems is a dangerous strategy, not just because it will not work, but because of the political tensions within Europe that it is already creating, and will continue to create.

A further problem that will have to be faced going forward is the external imbalances that were such a feature of the world economy in the run-up to the crisis, and that appear to be widening again. We know what adjustments are needed in the long run to get these down to a sustainable level. In deficit countries, expenditure needs to fall relative to income—unfortunately, this will depress demand in the short run, which is not what the world economy needs. Deficit countries also need to see their real exchange rates depreciate, which can happen in three ways: nominal depreciation, foreign inflation, and domestic deflation. The first two are preferable to the third, which is economically costly in a world in which many prices and wages are sticky downwards. In surplus countries, the required adjustment is for expenditure to rise relative to income, and for real exchange rates to appreciate. Rising domestic expenditure is, of course, as helpful in the short run in sustaining demand as the falling expenditure in deficit countries is harmful. Once again, surplus countries' real exchange rates can appreciate as a result of a nominal appreciation, domestic inflation, or harmful foreign deflation. If surplus countries do not wish to see domestic inflation, nominal appreciation is the least costly way of achieving

Figure 10. Momentum in industrial output



Source: CPB.

the required relative price adjustment.

The travails of the Eurozone periphery show clearly the problems of adjusting via domestic deflation. As in the case of the East Asian economies during the 1990s, a perception that risk was not an issue led to massive inflows of capital into economies such as Ireland and Spain; the result was rising wages and prices, appreciating real exchange rates, and falling competitiveness. As members of the Eurozone (for now at least), they do not have devaluation available as an option, and so they are relying on "internal devaluations," or domestic deflation, in order to rebalance their economies. Since wages are falling, but household debts are not, this is proving to be a very painful process, involving increasing levels of unemployment and mounting debt problems of one sort or another. These feed back into the banking sector, and then into the real economy, from whence the cycle can recommence. At the global level, nominal exchange rates are flexible, and these costs can be avoided.

The Crisis and International Cooperation

This crisis will definitively end one day, but the world will still be left with the same long-term problems that it faced in 2007. Among the most important of these are: how to manage the rise of China and India to superpower status; how to ensure that all nations retain confidence in the ability of the market to supply them with the food and raw materials that they need in order to feed their people and their factories; and how to deal with the shared challenge of global climate change. All of these problems have their origin in, or are made more acute by, the rise of Asia to its rightful place in the world. The solutions to all of them involve, in part, the development of more effective and inclusive multilateral structures. If this crisis leads to more effective patterns of international cooperation, then it will not have been wasted.

The early signs were promising, with the G-20 supplanting the G-7, and the London summit of April 2009 generally being regarded as a success. Since then, however, the process has run into difficulties, with deep divisions emerging between national governments regarding what the appropriate response to the ongoing weakness in the world economy should be. This transition is a logical one, given the economics of the situation. In 2009, fiscal stimulus was on the agenda. The problem facing governments was that one country's stimulus helped others: the temptation was therefore to free-ride off the stimulus packages of others. As the Irish minister of defense said in January 2009:

> We tried the fiscal stimulus approach in response to the oil shock in the late 1970s. The increased spending power given to the Irish consumer largely leaked out on increased imports and left us in an even worse position. ...From Ireland's point of view, the best sort of fiscal stimulus are those being put in place by our trading partners. Ultimately these will boost demand for our exports without costing us anything.

The problem, of course, is that if everyone had taken the same attitude, then there would have been no stimulus at all, which would have been collectively costly.

There was thus a strong incentive for national governments to cooperate with each other. Keeping trade open was a logical part of the bargain, since it was trade that allowed countries to benefit mutually from each other's recovery programs.

In 2010, however, the Greek fiscal crisis, which might reasonably have been regarded as *sui generis*, sparked a stampede towards austerity throughout the advanced economies. With fiscal policy no longer in play, stimulus measures inevitably came to increasingly involve monetary policy. Unfortunately, the spillovers associated with expansionary monetary policy are negative as well as positive. It is true that if quantitative easing in the United States, say, succeeds in stimulating the U.S. economy, then that is in and of itself a very good thing for the rest of the world. However, there are other side effects that are less positive. On the one hand, if exchange rates are allowed to adjust, then partner countries will find their exchange rates appreciating. As mentioned earlier, nominal appreciation is precisely what is called for in the case of surplus country exchange rates, but this spillover is certainly perceived as negative by many countries. On the other hand, if exchange rates are kept fixed, the result may be capital inflows and inflation. Allowing exchange rates to adjust would seem to be the first-best solution, with capital controls a possible second-best; in either event, international cooperation may be strained. It is strained even further by the radically different economic analyses prevalent in different countries—symbolized by some highly undiplomatic and well-publicized German comments about quantitative easing in the run-up to the Seoul Summit. This difficulty is all too familiar to students of the 1930s.

The world economy is thus entering a somewhat dangerous phase, with a halting world recovery, and the possibility of volatile exchange rates arising from an asymmetric process of monetary expansion. The lesson of the interwar period is that such swings in exchange rates can be dangerous, since countries pursuing more orthodox policies can find themselves with overvalued exchange rates and serious competitiveness problems. Their response in the interwar period was to erect higher tariff and non-tariff barriers to trade. While protection was not a crucial ingredient in making the Depression worse—flawed monetary and fiscal policies were primarily to blame—the fragmentation of the world economy and the search for self-sufficiency contributed to the poisonous atmosphere of the period, which culminated in war.

Conclusion

After the traumas of 2008–9, the world economy has enjoyed a strong recovery driven by the performance of emerging economies. However, the recovery has been losing momentum all year, and there are several reasons why growth prospects in the advanced economies are not particularly bright in the short-term future. To the extent that these economies are still the engine of growth for the exporting economies of Asia, this matters for the emerging economies as well. And to the extent that Asia is a key engine of growth for Germany, it matters for the central Eurozone economy as well.

The most likely scenario for 2011–12 is probably the one sketched out in the October IMF *WEO:* a gradual slowdown in economic growth across the world, with the basic trends intact. This means continued fast growth in the emerging economies, below-par growth in the advanced economies, and a corresponding convergence in living standards and influence between rich and poor countries. Within the Eurozone, however, more of the same will mean divergence between core and periphery, with the latter falling ever further into depression. And within the United States, it will mean continuing high levels of unemployment.

There are several downside risk factors however. The most obvious one right now is that the crisis in the Eurozone will continue to spiral out of control, and that policy makers continue to make the wrong calls. If the problem facing the periphery is one of solvency, then continued provision of liquidity so that peripheral taxpayers can continue repaying debts that are excessive and unaffordable, combined with austerity measures driving economies ever further into recession, will just make things worse in the long run. The Eurozone will then be faced with a series of unpalatable options: coordinated debt restructuring, fiscal transfers, or monetization of the debt. If none of these happen, then a Eurozone breakup will be in the cards, with unpredictable and dangerous consequences, political as well as economic, for the region.

Further risk factors include bank losses that still remain hidden in Europe, and the possibility of uncoordinated monetary stimuli that could place international capital markets—and, in a worst-case scenario, international trade—under serious political pressure.

These political risks will be higher to the extent that unemployment remains high in key economies like the United States. This crisis is coming after a period of several decades during which U.S. inequality soared, and median incomes stagnated. Survey evidence shows clearly that the unskilled are hostile to globalization, and it was blue-collar workers who were most likely to vote against EU constitutional reform in France in 2005 and Ireland in 2008. Anti-globalization sentiment was a factor in both these votes, and it is predictable that if unemployment remains high in the years ahead these sentiments will only increase. Even more alarmingly, there is evidence that support for extremist parties rises in advanced economies as economic growth slows. As Adam Posen (2010a) has recently pointed out, the biggest downside risk facing the world economy is of a political reaction "that could undermine our long-run stability and prosperity." It is, he says, "just as important to future generations that we deliver them an intact democratic system and liberal world economy, as to consider the commonly spoken debt-burden concerns" (Posen 2010b). The onus for ensuring that this in fact happens cannot lie on the shoulders of the deficit countries alone.

Governments can help in several ways. Medium- and long-term reforms can help create much-needed fiscal space today, without subtracting from the level of demand; governments with fiscal space need to use this and not engage in kneejerk austerity measures; European leaders should be more honest about the bank losses on that continent, with the recapitalization needs of AIB and Bank of Ireland—two banks that passed European stress tests earlier this year—serving as a much-needed wake-up call; and the Asian economies can be rebalanced, leaving them less vulnerable to the slowing economies of the West.

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The State of the U.S. Economy*

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It has been more than three years since the economic crisis first flared up in August 2007, and the U.S. economy is still operating far below its potential. Unemployment is high at 9.8% (November 2010). Economic growth is low at 2.5% (third quarter of 2010). Hopes for a strong economic recovery were high after the fall 2008 panic phase of the crisis, but these hopes were dashed as the recovery fizzled and economic growth fell sharply this year compared to last year.

In my view, the outlook for next few years will be subpar growth and high unemployment because of the drag of uncertainty about economic policy, including the risks and burden of the growing government debt. In these remarks I explain this view. I focus on the overall response of fiscal policy and monetary policy to the crisis. I draw on and summarize the results of a research project (listed in the appendix) in which I have been engaged at Stanford University during the past three years. The main purpose is to assess the future outlook and draw policy lessons for the future.

Fiscal Policy Responses

The federal fiscal policy response to the economic crisis mainly took the form of discretionary short-term stimulus packages. In my view these did not stimulate the economy much, if at all. Now, rather than leaving the economy in a stronger growth position, the interventions have weakened the economy and left it with the burdens of increased debt and higher government spending as well as concerns about future tax increases. While the cash-for-clunkers and the first-time home buyers programs moved purchases forward by a few months, they did not increase economic growth on a more permanent basis.

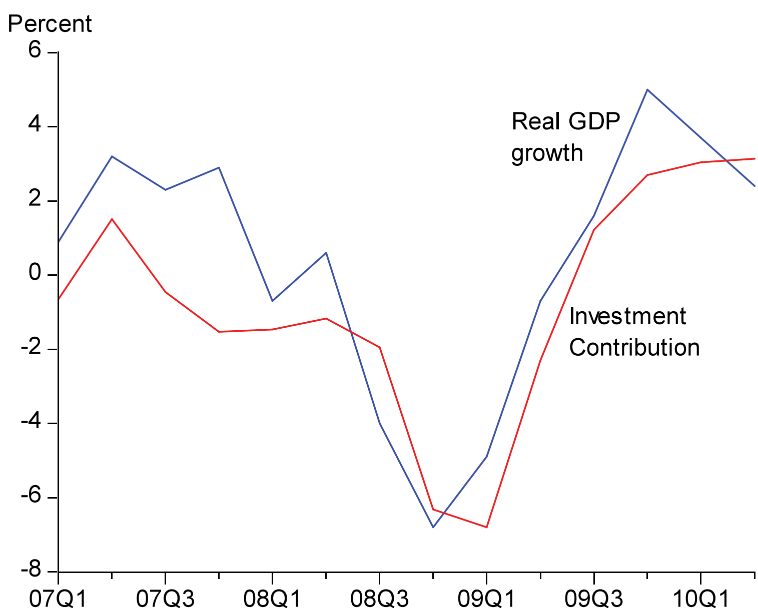
I base my conclusions on empirical research that examines the direct impacts of different components of the stimulus packages as well as on basic economic theory, including the theory incorporated in modern econometric models. First, consider the American Recovery and Reinvestment Act of 2009. One component of this stimulus package focused on temporarily increasing people's disposable income by sending checks, temporarily increasing tax credits, and correspondingly reducing withholding. The objective of this part of the package was to jump-start consumption demand and thereby jump-start the economy. Aggregate disposable personal income did jump at the start of the stimulus; however, aggregate personal consumption expenditures did not increase by much, if at all, around that time. If you examine data at the aggregate level, the stimulus package had no noticeable effect on consumption. The same was true of the fiscal policy response passed in February 2008, in which checks were also sent to people on a one-time basis. Disposable income rose, but there was no noticeable increase in personal consumption expenditures. It is important to emphasize that this is what well-known economic principles—in particular the permanent income theory and the life cycle theory of consumption—would predict from such temporary payments. In other words, the small impact of the policy response is exactly what one would have expected based on economic reasoning.

Next, consider the government purchases part of the stimulus package of 2009, also designed to stimulate economic growth. An examination of what actually happened indicates that such purchases had little to do with the recovery in economic activity, and they have not prevented the recent slowdown. Data from the Bureau of Economic Analysis provide the evidence: changes in government purchases did not correlate with the changes in economic growth from recession to recovery. On the contrary, most of the recovery last year has been due to investment—including inventory investment—and has little to do with the discretionary stimulus package.

Figures 1 and 2 illustrate the story in simple graphical terms. Figure 1 shows the growth rate of real GDP and the percentage contribution to that growth from private investment, including inventory investment. Note that real GDP growth declined in the recession, then began to increase in the recovery, and now has slowed downs again. Note also that the changes in investment are closely correlated with these ups and down in the economy.

Figure 2 shows the contribution of both non-defense federal government purchases and state-local government purchases of goods and service to the growth rate of GDP. Contributions from defense spending are not shown because they were not part of the stimulus package.

Figure 1. Decompositions of Real GDP Growth into Contribution Due to Investment

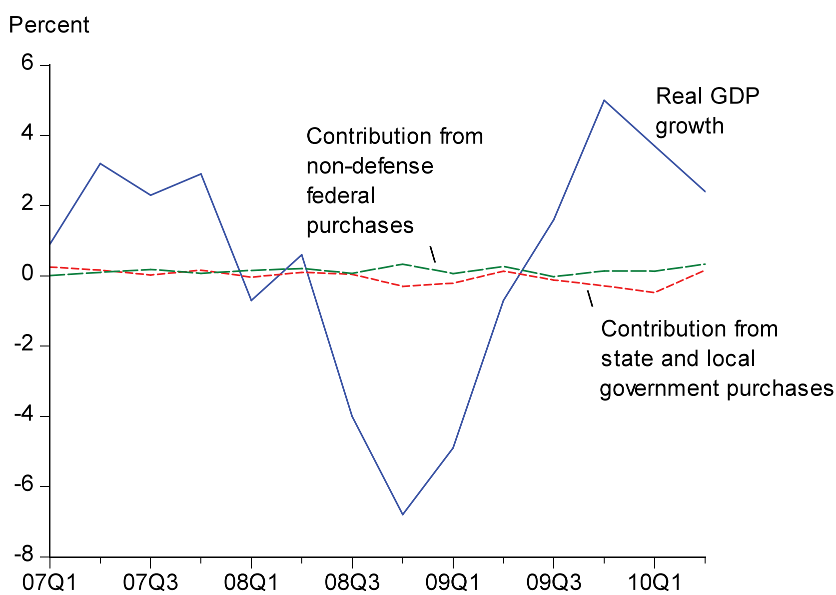


Note that these government purchases have little to do with the ups and downs of GDP during this period. If the increase in government spending in the stimulus package actually increased real GDP growth and created jobs, one would likely have seen a more noticeable effect in the decompositions. The impact of government purchases is particularly small in comparison with investment. Changes in consumption and net exports (not shown here) are also more significant than the changes in government purchases, but the main story is investment.

How can the contributions of the change in government purchases be so small given that the stimulus was $862 billion? One reason is that the part of the package explicitly devoted to federal purchases of goods and services was quite small. In fact, of the $862 billion package, the amount of government purchases at the federal level was $7.9 billion in 2009 and $10.5 in the first half of 2010 according to the Bureau of Economic Analysis. Focusing on infrastructure spending (gross investment) at the federal level, the amount was even smaller: $0.9 billion in 2009 and $1.5 billion in the first two quarters of 2010. Thus, of the total $862 billion, only 0.3% has been on federal infrastructure projects, as illustrated by the small slice of the bars in figure 3.

A larger amount of government purchases might have been expected at the state and local level, and indeed grants by the federal government to the states were a large part of the stimulus package of 2009. However, uncertain timing by which state governments spend federal grant money, as well as the fungible nature of grant funds, makes it difficult to translate grants into purchases. In fact, both government gross investment (infrastructure) and government consumption purchases at the state and local level have declined since the economic crisis began. Moreover, according to aggregate statistics they show little positive association with the

Figure 2. Contribution due to Government Purchases



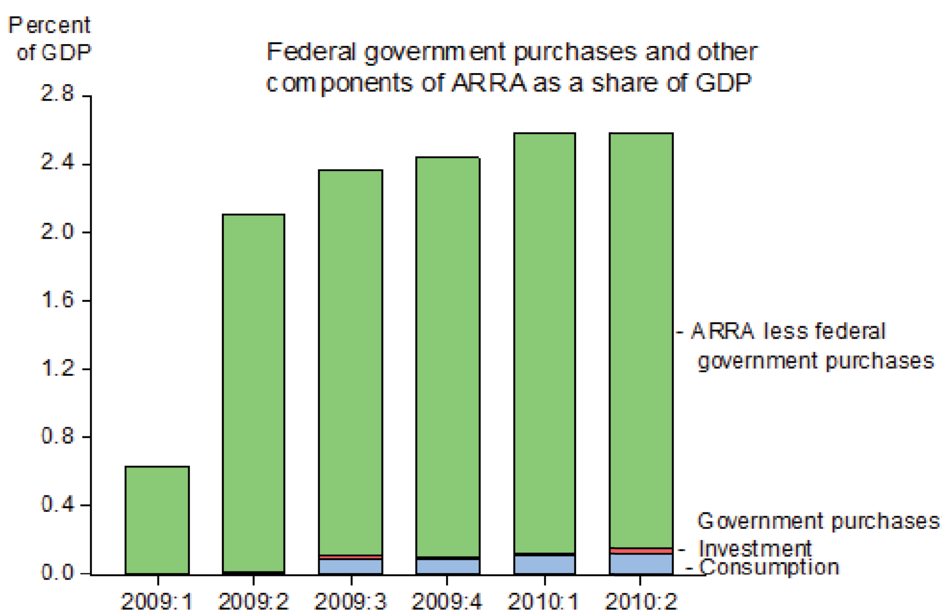
federal grants to state and local government once one controls for the state of the economy and other sources of receipts. In any case, there is little evidence that on balance the stimulus packages increased government purchases at the state and local level.

One could posit other counterfactuals in which state and local government spending might have declined by a larger amount without the stimulus, but more research is needed to determine what would have happened in the counterfactual of "no discretionary stimulus." In the meantime, these data, at the very least, suggest that the recovery and the slowdown have been due to changes in investment, not government purchases.

Another approach to evaluate the impact of the response of policy is to use econometric model simulations. However, in most attempts to evaluate policy using models, the results are built into the models, and were built in well before the stimulus package was enacted. Frequently the same economic models that said, a year and half ago, that the impact would be large are now used to show that the impact is in fact large. In other words, these assessments are not based on the actual experience with the stimulus.

For example, economists John Cogan, Volker Wieland, Tobias Cwik, and I raised questions about the robustness of estimates of the impact of the stimulus package soon after they were released by the administration (in a white paper by Christina Romer and Jared Bernstein) in January 2009. Their estimates were based on models that were much different from more modern models that take account of expectations of the future, including increases in debt and future taxes. We found the economic impacts to be much smaller using the more forward-

Figure 3. Federal Government Purchases and Other Components of ARRA as a Share of GDP



looking models than with the older Keynesian models. Since then, many technical papers have been written on this subject, and in my view the consensus is that the impacts of the stimulus package are much smaller than originally reported by the administration.

Another example is the recent working paper by economists Alan Blinder and Mark Zandi on the impact of federal stimulus policies. In this case, the policies are run through a model and the paper reports what the model says would happen. It does not look at what actually happened, and it does not look at other models. I explained the defects with this type of exercise in testimony at a July 1, 2010, House Budget Committee hearing. I showed that the results are entirely dependent on the model: old Keynesian models show large effects and more modern models show smaller effects.

Other evidence from models comes from an International Monetary Fund study that reports estimates of government spending impacts that are much smaller than those previously reported by the administration. The IMF uses a very large complex model called the Global Integrated Monetary and Fiscal (GIMF) Model. It shows that a 1% increase in government purchases (as a share of GDP) increases GDP by a maximum of 0.7% and then fades out rapidly. This means that government spending crowds out other components of GDP (investment, consumption, net exports) immediately and by a large amount. The IMF estimate is much less than the impact reported in the Romer and Bernstein paper.

Monetary Policy Responses

In evaluating the monetary policy response to the crisis, I think it is useful to divide the crisis into three periods: 1) the period from the flare-up of the crisis in August 2007 to the panic in late September 2008; 2) the period of the panic from late September through October 2008; and 3) the period after the panic.

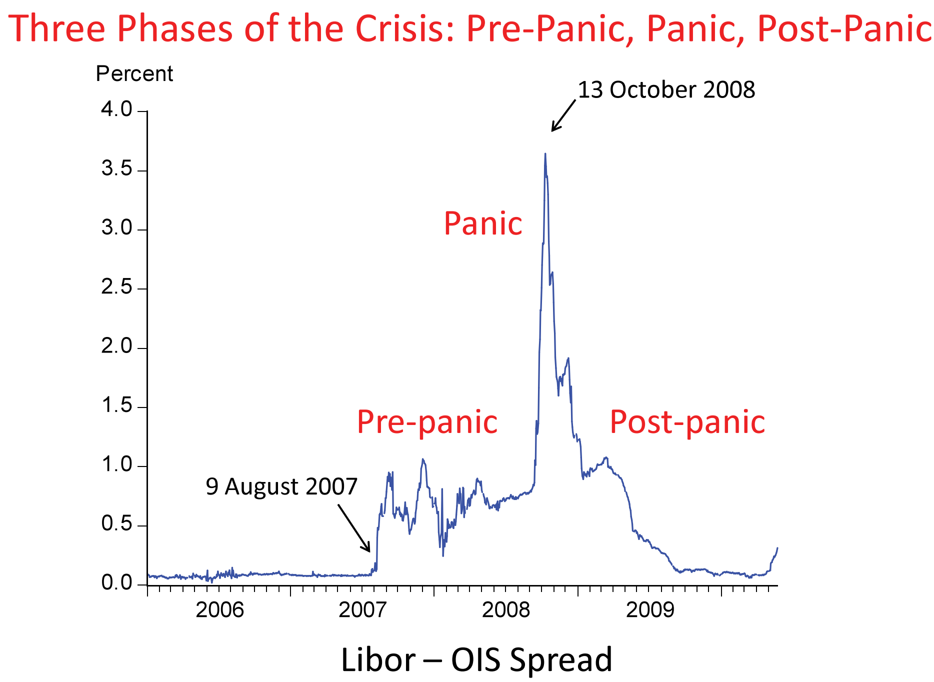
The three periods are illustrated in figure 4, which shows a frequently used measure of financial stress in the interbank market: the interest rate spread between the three-month interbank lending rate (Libor) and the expected federal funds rate over the same three-month period (OIS). Note that the beginning of the economic crisis is quite evident in August 2007 and that the panic begins in late September 2008 and reaches its peak in October 2008.

The main monetary policy responses to the crisis were a cut in the federal funds rate and the use of the Fed's balance sheet to finance massive and extraordinary lending and securities purchase programs. The Federal Reserve cut the federal funds rate by two percentage points during the panic, and this helped to counteract the rising interest rate spreads and thereby alleviated some of the negative impacts of the panic. In my view, however, the cuts in early 2008 were at times too sharp and erratic and may have caused a depreciation of the dollar and thereby rising oil prices, which had negative effects on the economy.

By far the most unusual response of monetary policy to the economic crisis, however, was the massive extraordinary measures in which the Federal Reserve used its balance sheet. I assess their impacts during the three phases mentioned above.

My assessment of the extraordinary monetary measures that were taken in the year before

Figure 4. Three Phases of the Crisis



the panic is that they did not work and that some were harmful. The Term Auction Facility (TAF) did little to reduce tension in the interbank markets during this early period, as I reported in research at that time, and it drew attention away from counterparty risks in the banking system. The extraordinary bailout measures, which began with Bear Stearns, were the most harmful in my view. The Bear Sterns actions led many to believe that the Fed's balance sheet would again be available in the case that another similar institution failed. But the Fed closed its balance sheet in the case of Lehman Brothers, and then reopened it again in the case of AIG. It was then closed off again for such bailouts, and the TARP was proposed. Event studies show that the rollout of the TARP coincided with the severe panic. For example, figure 5, which blows up the panic section of figure 4, shows that the Libor-OIS spread rose dramatically after TARP was announced. Initially, there was considerable confusion about how the TARP would work, and the Libor-OIS spread did not stop rising until the Treasury clarified that TARP would be used for equity injections. So I have to disagree with those who view all the extraordinary interventions as having worked.

The panic period is the most complex to analyze because the Fed's main measures during this period—those designed to deal with problems in the money market mutual fund and the commercial paper markets—were intertwined with the FDIC bank debt guarantees and the clarification that the TARP would be used for equity injections, which was a major reason for the halt in the panic. In any case, a detailed examination of micro data shows that the Fed's asset-backed commercial paper money market mutual fund liquidity facility (AMLF) was effective. And I have argued that the Federal Reserve should also be given credit for rebuilding confidence by quickly starting up these complex programs from scratch in a turbulent period and for working closely with central banks abroad in setting up swap lines.

The main policy responses during the post-panic period were the large-scale asset purchase programs. Much of the work evaluating these programs has been based on "announcement effects," which I think can be quite misleading. It is therefore necessary to look at the programs themselves—at the amount purchased and the timing—not just the announcement effects. Consider the impact of the Fed's mortgage-backed securities (MBS) purchase program, which at $1.25 trillion is the largest single extraordinary program. My research on that program shows that it had a rather small and uncertain effect on mortgage rates once one controls for prepayment risk and default risk. If so, such a program is not an effective monetary instrument. The initial announcement of the MBS program on November 25, 2008, had a noticeable effect on mortgage spreads, but the effects soon disappeared. The March 18, 2008, announcement effect of the extension of the program actually raised interest rate spreads, but it too was soon reversed.

Whether one believes that these unorthodox monetary programs worked or not, there are reasons to believe that their consequences going forward are negative. First, they raise questions about central bank independence. The programs are not monetary policy as conventionally defined, but rather fiscal policy or credit allocation policy, because they try to help some firms or sectors and not others and are financed through money creation rather than taxes or public borrowing. Unlike monetary policy, there is no established rationale that such policies should be run by an independent agency of government. By taking these extraordinary measures, the Fed has risked losing its independence over monetary policy.

Figure 5. Panic Phase of Crisis

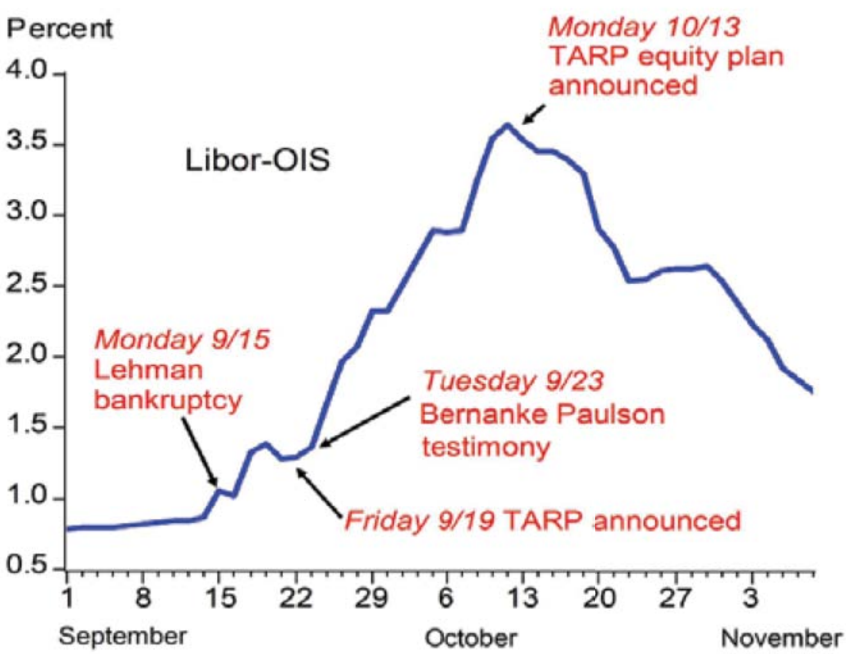
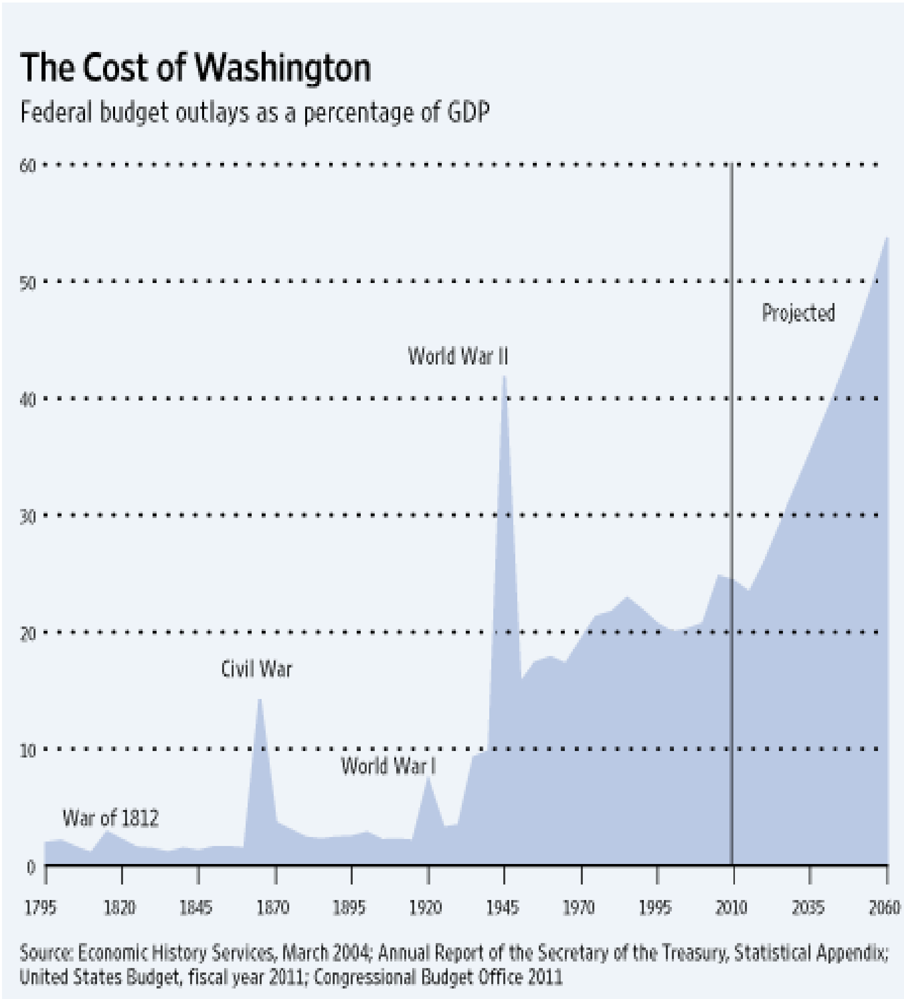


Figure 6. Federal Budget Outlays as a Percentage of GDP



A second negative consequence of the programs is that unwinding them involves considerable risks. In order to unwind the programs in the current situation, for example, the Fed must reduce the size of its MBS portfolio and reduce reserve balances. But there is uncertainty about how much impact the purchases have had on mortgage interest rates, and thus there is uncertainty about how much mortgage interest rates will rise as the MBSs are sold. There is also uncertainty and disagreement about why banks are holding so many excess reserves now. If the current level of reserves represents the amount banks desire to hold, then reducing reserves could cause a further reduction in bank lending.

A third negative consequence is the risk of future inflation. If the Fed finds it politically difficult to reduce the size of the balance sheet as the economy recovers and as public debt increases, then inflationary pressures will undoubtedly increase.

Conclusion

In conclusion, I find that on balance the federal policy responses to the crisis have not been effective. Three years after the crisis began, the recovery is weak and unemployment is high. A direct examination of the fiscal stimulus packages shows that they had little effect and have left a harmful legacy of higher debt. The impact of the extraordinary monetary actions has been mixed: while some actions were helpful during the panic stage of the crisis, others brought the panic on in the first place and have had little or no impact since the panic. The monetary actions have also left a legacy of a large monetary overhang that must eventually be unwound.

Is there another policy response that would have worked better or would work better in the future? In a testimony entitled, "The State of the Economy and Principles for Fiscal Stimulus," which I gave before the U.S. Senate Budget Committee in November 2008, I recommended a different type of fiscal policy response to the crisis. The response was based on certain established economic principles, which I summarized by saying that policy should be *predictable, permanent, and pervasive,* affecting incentives throughout the economy. I argued "that there are many good fiscal packages that are consistent with these three principles. One would consist of the following": 1) committing to keep income tax rates where they are, effectively making current income tax rates permanent; 2) making the worker's tax credit, which President Obama had proposed, permanent rather than temporary; 3) enacting a responsible government spending plan that met reasonable long-term objectives, put the U.S. economy on a credible path to budget balance, and would be expedited to the degree possible without causing waste and inefficiency; and 4) recognizing that the "automatic stabilizers" will help stabilize the economy, and therefore counting them as part of the overall fiscal package even though they do not require legislation.

This is not the kind of economic policy that has been followed. Rather than being predictable, the policy response has created uncertainty about the debt, growing federal spending, future tax-rate increases, new regulations, and the exit from the unorthodox monetary policy. Rather than permanent, it has been temporary and thereby has not created a lasting economic recovery. And rather than being pervasive, it has targeted certain sectors or groups such as automobiles, first-time home buyers, and large financial firms, while avoiding others. It is not surprising, therefore, that the policy response has left us with high unemployment and low growth. Given these facts, the best that one can say about the policy response is that things could have been even worse, a claim that I disagree with and see no evidence to support.

The good news is that we can get back to a stronger economic growth and a faster reduction in unemployment by following an economic policy based on these fundamental economic principles. As argued in a *Wall Street Journal* article "Principles for Economic Revival," published in September 2010 by George Shultz, Michael Boskin, John Cogan, Allan Meltzer, and myself, the policy experiences over the past two or three years, which I have reviewed in this paper, make the case for following such principles stronger than ever.

The outlook for 2011–12 depends very much on whether or not the United States makes these changes. This is illustrated in figure 6, which shows federal spending as a share of GDP; the chart appeared in the *Wall Street Journal* article by Shultz et al.

One of the most important needed policy changes is to bring down spending to the ratio to GDP that existed before the recent sharp increase in spending. If we make these changes—as well as other changes to fiscal and monetary policy described here—in a responsible and credible way, I believe that the U.S. economy can have a good recovery with above-par economic growth in the next few years. If we do not make the changes, then uncertainty will continue and the recovery will be slow.

* These remarks were derived directly from testimony at the U.S. Senate Budget Committee on September 22, 2010. I have written and testified earlier about the role of federal policy in causing the crisis, including the role of monetary policy in keeping interest rates too low for too long leading up to the crisis, the role of Fannie Mae and Freddie Mac in encouraging the origination of risky mortgages, and the role of regulatory policy in failing to administer effectively financial regulations on the books.

Appendix: Empirical Research Project on the Economic Crisis

The above remarks draw from an empirical research project on economic policy and the financial crisis at Stanford University and the Hoover Institution. The research began in the summer of 2007. The findings of this research have been reported in books, published research papers, and reports, which are listed for the record below. I have summarized the results in congressional testimony and in newspaper articles, which are also listed below. In order to download any of these items, go to www.JohnBTaylor.com.

Books

Getting Off Track: How Government Actions and Interventions Caused, Prolonged, and Worsened the Financial Crisis. Stanford, Calif.: Hoover Institution Press, 2009. Translated into Italian, Spanish, Polish, and Japanese.

The Road Ahead for the Fed. Edited with John Ciorciari. Stanford, Calif.: Hoover Institution Press, 2009.

Ending Government Bailouts as We Know Them. Edited with Kenneth Scott and George Shultz. Stanford, Calif.: Hoover Institution Press, 2010.

Research Papers and Reports

"Housing and Monetary Policy." In *Housing, Housing Finance, and Monetary Policy.* Proceedings of FRB of Kansas City Symposium, Jackson Hole, Wyo., September 2007.

"The Costs and Benefits of Deviating from the Systematic Component of Monetary Policy." Conference on Monetary Policy and Asset Markets Federal Reserve Bank of San Francisco, February 22, 2008.

"The Financial Crisis and the Policy Responses: An Empirical Analysis of What Went Wrong." *A Festschrift in Honour of David Dodge's Contributions to Canadian Public Policy* (Bank of Canada, November 2008): 1–18. Reprinted in *Critical Review* 21, nos. 2–3 (2009): 341–64.

"Further Results on a Black Swan in the Money Market." With John C. Williams. Stanford Institute for Economic Policy Research, Discussion Paper no. 07-046, May 2008.

"A Black Swan in the Money Market." With John C. Williams. Federal Reserve Bank of San Francisco, Working Paper Series, 2008-04, April 2008.

"A Black Swan in the Money Market." With John C. Williams. *American Economic Journal: Macroeconomics* 1, no. 1 (January 2009): 58–83.

"The Lack of an Empirical Rationale for a Revival of Discretionary Fiscal Policy." *American Economic Review: Papers and Proceedings* 99, no. 2 (May 2009): 550–55.

"The Need to Return to a Monetary Framework." *Business Economics* 44, no. 2 (2009): 63–72.

“Systemic Risk and the Role of Government.” Conference on Financial Innovation and Crises, Federal Reserve Bank of Atlanta, May 12, 2009.

“The Need for a Clear and Credible Exit Strategy.” In *The Road Ahead for the Fed*, ed. John Ciorciari and John Taylor. Stanford, Calif.: Hoover Institution Press, 2009.

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“Should the G-20 Reconsider the Decision to Treble IMF Recourses?” In *Renewing Globalization and Economic Growth in a Post-Crisis World: The Future of the G-20 Agenda*. Pittsburgh, Pa.: Carnegie Mellon University Press, August 2009.

“Analysis of Daily Retail Sales Data during the Financial Panic of 2008.” Working Paper, Stanford University, October 2009.

“Responses to Additional Questions from the Financial Crisis Inquiry Commission.” November 2009.

“Estimated Impact of the Fed’s Mortgage-Backed Securities Purchase Program.” With Johannes C. Stroebel. NBER Working Paper no. 15626, December 2009.

“Government Actions and Interventions, More Harm than Good?” *Development Outreach*, The World Bank Institute, Washington D.C., December 2009, 50–53.

“Globalization and Monetary Policy: Missions Impossible.” In *The International Dimensions of Monetary Policy*, ed. Mark Gertler and Jordi Gali, 609–24. Chicago: University of Chicago Press, 2009.

“Defining Systemic Risk Operationally.” In *Ending Government Bailouts as We Know Them*, ed. Kenneth Scott, George Shultz, and John B. Taylor. Stanford, Calif.: Hoover Press, 2010.

“Better Living through Monetary Economics.” In *Better Living through Economics*, ed. John Siegfried, Cambridge, Mass.: Harvard University Press, 2010, 146–63.

“Getting Back on Track: Macroeconomic Policy Lessons from the Financial Crisis.” *Federal Reserve Bank of St. Louis Review* (May/June 2010): 165–76.

“Simple and Robust Rules for Monetary Policy.” With John C. Williams. in *Handbook of Monetary Economics*, ed. Benjamin Friedman and Michael Woodford. 3, Elsevier, forthcoming.

“New Keynesian versus Old Keynesian Government Spending Multipliers.” With John F. Cogan, Tobias Cwik, and Volker Wieland. *Journal of Economic Dynamics and Control* 34 (2010): 281–95.

“Origins and Policy Implications of the Crisis.” In *New Directions in Financial Services Regulation*, ed. Roger Porter. Cambridge, Mass.: MIT Press, 2010.

“Macroeconomic Lessons from the Great Deviation.” *Macroeconomics Annual.* National Bureau of Economic Research. Cambridge, Mass.: MIT Press, 2010.

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Kumhof, Douglas Laxton, Dick Muir, Susanna Mursula." *Journal of Monetary Economics,* forthcoming.

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"Monetary Policy Implications of the Global Crisis." Presented at the *International Journal of Central Banking* Conference, Bank of Japan, September 17, 2010.

Congressional Testimony

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"The State of the Economy and Principles for Fiscal Stimulus." Testimony before the Committee on the Budget, United States Senate, November 19, 2008.

"Monetary Policy and the Recent Extraordinary Measures Taken by the Federal Reserve." Testimony before the Committee on Financial Services, U.S. House of Representatives, February 26, 2009.

"Monetary Policy and Systemic Risk Regulation." Testimony before the Committee on Financial Services, U.S. House of Representatives, July 9, 2009.

"Testimony." Subcommittee on Commercial and Administrative Law, Committee on the Judiciary United States House of Representatives, October 22, 2009.

"An Exit Rule for Monetary Policy." Testimony on unwinding emergency Federal Reserve liquidity programs and implications for economic recovery, before the Committee on Financial Services, U.S. House of Representatives, March 25, 2010.

"Perspectives on the U.S. Economy: Fiscal Policy Issues." Testimony before the Committee on the Budget, U.S. House of Representatives, July 1, 2010.

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"Why Toxic Assets Are So Hard to Clean Up." *Wall Street Journal,* July 20, 2009.

"Fed Needs Better Performance, Not Powers." *Financial Times,* August 10, 2009.

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"The Dodd-Frank Financial Fiasco." *Wall Street Journal,* July 1, 2010.

"The Fed and the Crisis: A Reply to Ben Bernanke." *Wall Street Journal,* January 11, 2010.

"What Should the Federal Reserve Do Next?" *Wall Street Journal,* September 9, 2010.

"Principles for Economic Revival." With George Shultz, Michael Boskin, John Cogan, and Allan Meltzer. *Wall Street Journal* September 16, 2010.

China and Global Recovery

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Overview

China applied ample stimulus measures throughout the global financial crisis to bolster short-term economic activity, and by doing so contributed importantly to global economic performance in 2009 and 2010. Inadvertently, as external demand contracted, China's current account surplus shrank over these years from pre-crisis levels, thus "giving back" to deficit countries an equivalent value of net-export GDP activity. However, these growth contributions were inherently short-term in nature, and were not locked in through fundamental policy changes, and hence cannot be counted upon to contribute to world economic recovery in the future. Pro-growth action within Beijing's ability can contribute to near-term growth, but whether China's growth is founded on perpetuating the global imbalances, or rather builds on a reduction of those imbalances, remains to be seen because the outcome depends in part on Chinese policy choices. Rebalanced growth would be higher for both China and the rest of the world in the long-term. The policy changes entailed in rebalancing are multiple and complicated, and include fiscal, structural, and exchange rate adjustment.

Introduction

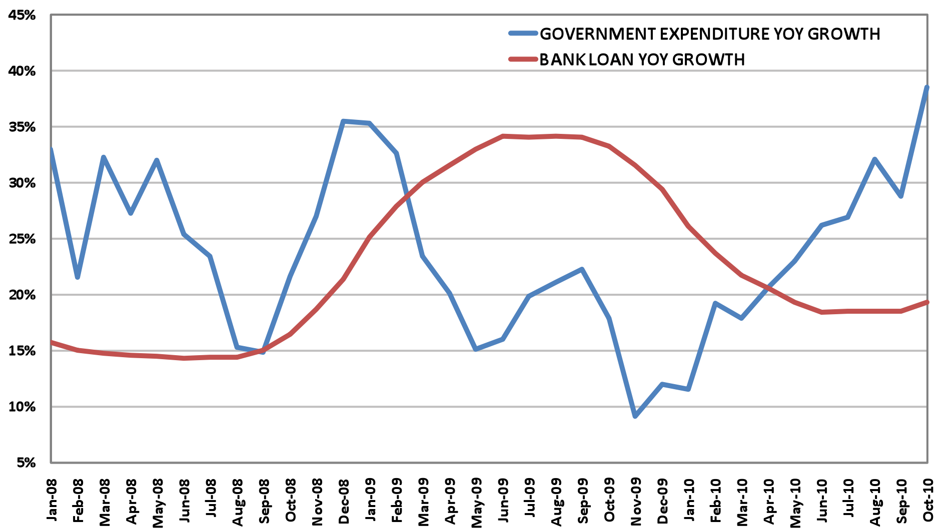
During the 1997 Asian Financial Crisis, China played a key role in stabilizing the region by keeping its currency stable. Ten years later, another financial turmoil hit Asia and the world, and China again played an important role in stabilizing regional and global growth. This paper looks at China's reaction to the global financial crisis in 2007–8, its impact on neighboring countries, and its role in global recovery. I begin by summarizing China's reaction to the crisis and the impact of resulting policies on regional and global growth. I then describe why these policies represent a reversion to old patterns of growth and therefore cannot be a recipe for sustaining balanced growth in the future. To contribute to global recovery, China needs to alter its growth model, and I summarize key aspects of achieving that, as well as impediments. Finally, I opine on the most likely scenario for rebalancing China in the medium term, and the implications of this for Asia and the world.

China During the Crisis: A Locomotive of Regional and Global Growth

In response to the collapse of external demand in the acute phase of the global financial crisis, China fell back on old patterns of fueling growth through domestic investment. Its stimulus took the form of bank lending facilitated by government guarantees, suspension of lending quota limits, and relaxation of a ban on municipal borrowing. Bank loan growth went

Figure 1. Government Expenditure and Bank Loans

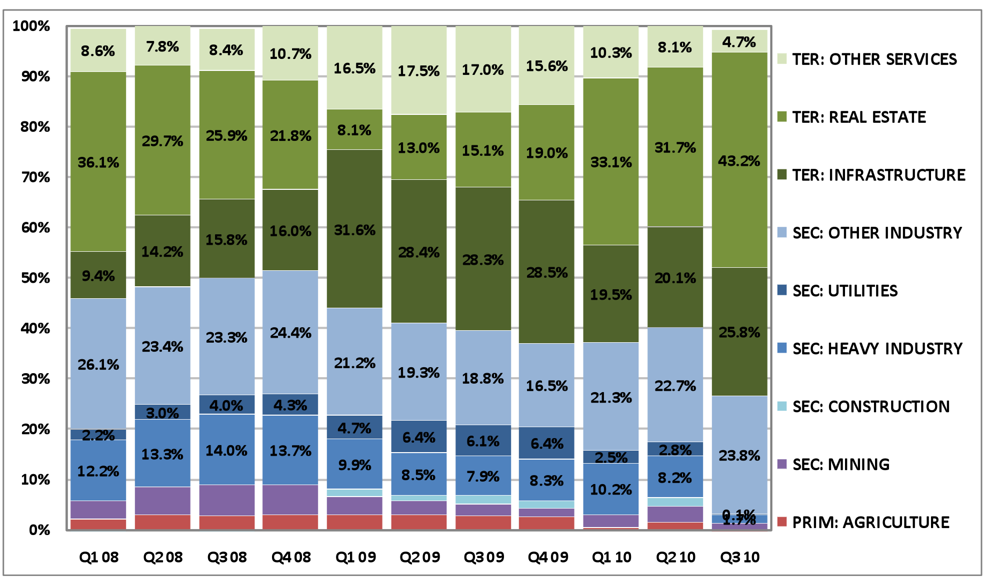
% change yoy, 3 months moving average



Source: Ministry of Finance, PBoC, RHG.

Figure 2. Contribution to Urban Fixed Asset Investment (FAI) Growth

% contribution to total yoy change

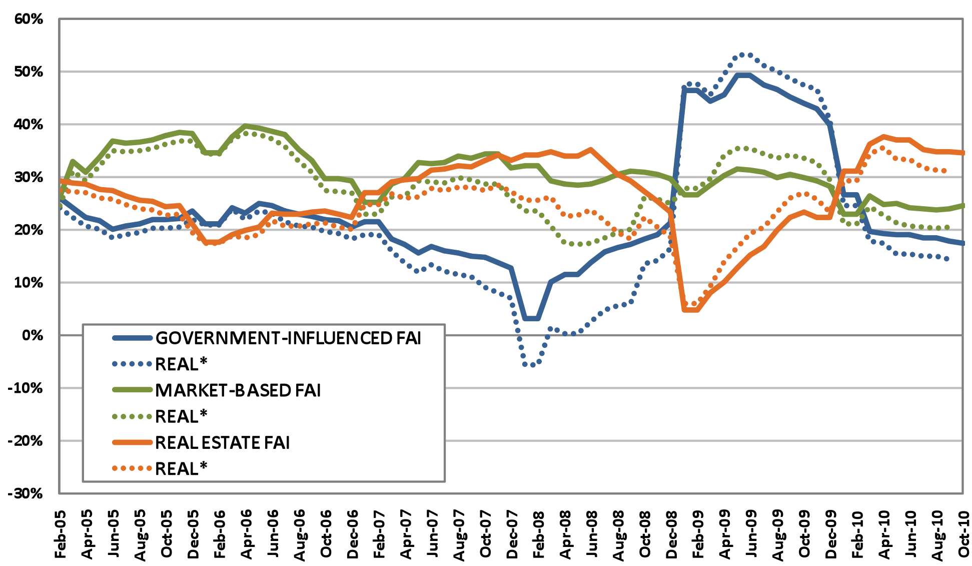


Source: NBS, RHG.

from a pre-crisis growth pace of 15% year-on-year (yoy) growth to a crisis high of 35% (figure 1). This assured a nervous banking system of short-term profit, launched 8–10 trillion RMB of infrastructure projects that kept heavy industrial industries with rampant overcapacity in business while new real estate construction momentarily dried up, and kept commodity-exporting nations around the world in business (figure 2).

The crisis response fell back on old habits, in several ways: First, the sectors led by government intention, rather than market-driven industries such as retail, saw a boom. Real estate fixed-asset investment (FAI) seized up dramatically in late 2008 and early 2009 (figure 3). This differential tells us that profit-oriented firms ran from risk: market-driven actors in China are no different from their cousins elsewhere in the world. It was the state that could and did lean against the wind. Second, with a tailwind of strong global consumption growth pre-crisis, Beijing was willing to allow the currency to appreciate prior to mid-2008. However, once appreciation meant actual pressure to adjust inside China, that appetite for realignment disappeared quickly, and the *renminbi* was re-pegged against the U.S. dollar for the duration of the crisis. Other policy changes to lock in the lower good trade surplus that characterized the crisis were similarly avoided, so that once global recovery (haltingly) began, the same pre-crisis pattern of trade surplus increase returned. Other efforts were made as well, many to sustain the growth rate of consumption inside China. Subsidies for home appliances and electronics were doled out, and purchasing taxes on vehicles were slashed, so that consumption growth exceeded the GDP growth rate in 2009, and hence the share of consumption in GDP increased for the first time since 1999 (figure 4).

Figure 3. Government-Influenced vs. Market-Based FAI
% change yoy, Urban FAI, 3 months moving average



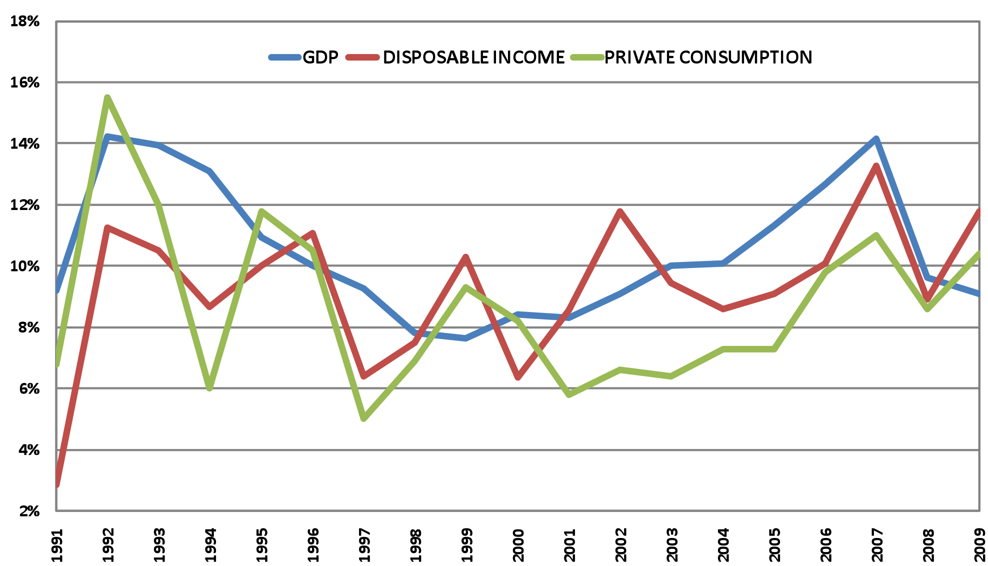
Source: NBS, CEIC, RHG; *adjusted with FAI price deflator.

Impact on Global Economic Recovery

By keeping its economy humming while the rest of the world contracted (figure 5), China saw its marginal share in Asian GDP growth and global GDP growth both shoot up strikingly. Until the eve of the crisis, China was contributing a respectable 15% of annual global GDP growth, up from a level of 10% that had prevailed for the decade to 2002. In 2009 that share surpassed 50%—half of all the growth on earth was attributable to China (figure 6). But of course, from this perspective, even an economy in autarky can contribute to gross global growth, without playing a role in supporting growth elsewhere. In China's case the fall of trade surpluses with some economies, including the United States and Europe—though not by choice—should be counted as real contribution to growth. Accounting for almost a quarter of China's growth in recent years, net exports were a large negative factor in 2009 GDP growth (figure 7), as the trade surplus shrank, and thus corresponded to a positive factor in the GDP of the United States.

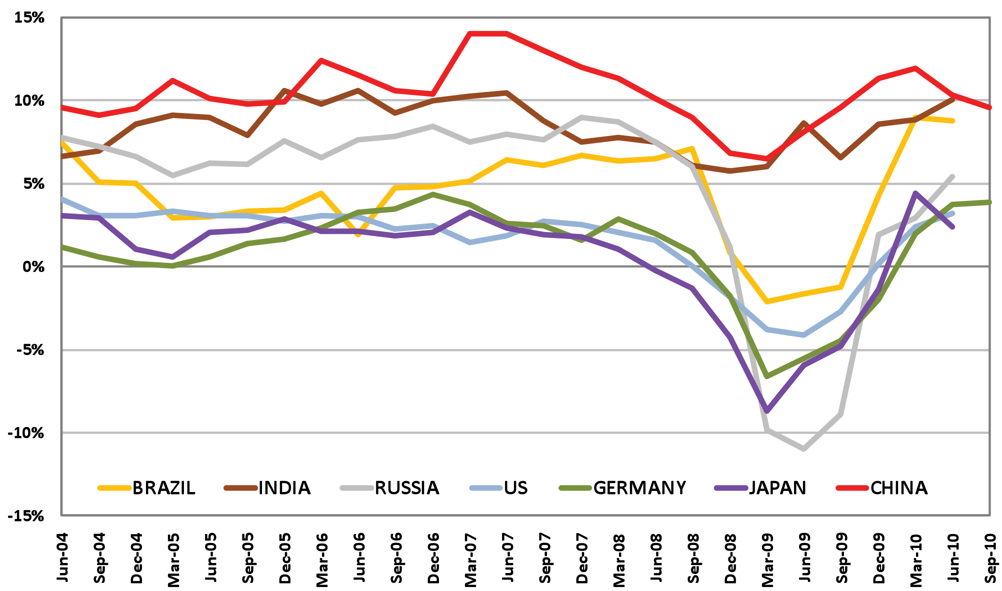
In addition to shipping less to deficit economies, China bolstered global growth by continuing to support output in the economies from which it imported. Commodity exporters did very well during the crisis by virtue of China's continued consumption of raw materials for infrastructure build-out and, after the initial anxiety, the resurgence of confidence in property as an investment class. China conferred benefits on specific exporters of intermediate goods as well, notably Taiwan, by granting generous subsidies for consumer electronics at home, to partly offset the drop in demand from the United States and other western markets. And as Chinese officials have asserted, it is not entirely unreasonable for them to claim credit for maintaining high growth inside China too, even if it delivers no other benefits, since China represents one-fifth of humankind.

Figure 4. Growth of GDP, Consumption and Disposable Income
% real change yoy



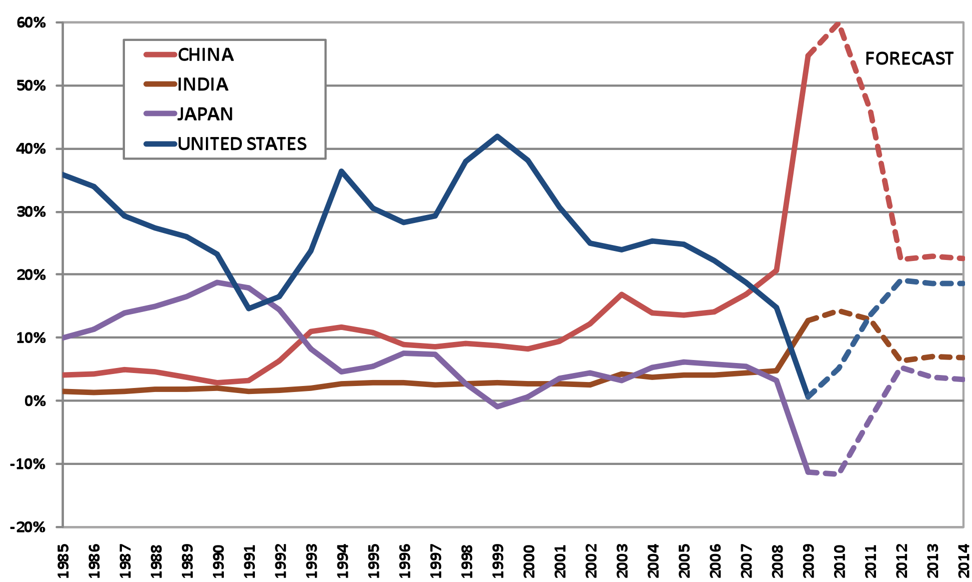
Source: EIU, RHG.

Figure 5. Quarterly GDP Growth
% yoy change



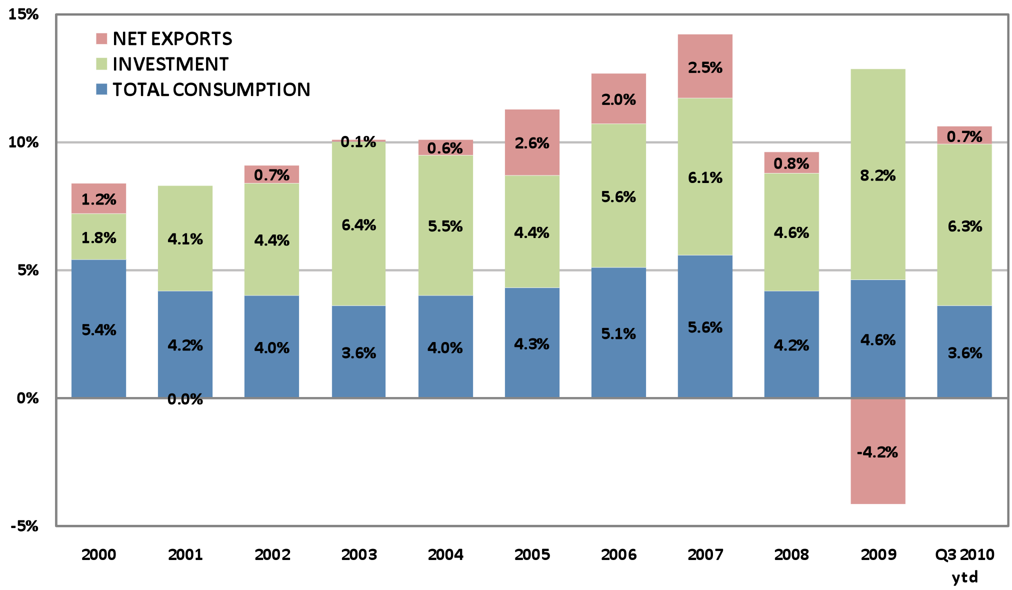
Source: NBS, CEIC, RHG.

Figure 6. Share of China and India in Global GDP Growth
% of real GDP growth, 2005 USD, 3 years moving average



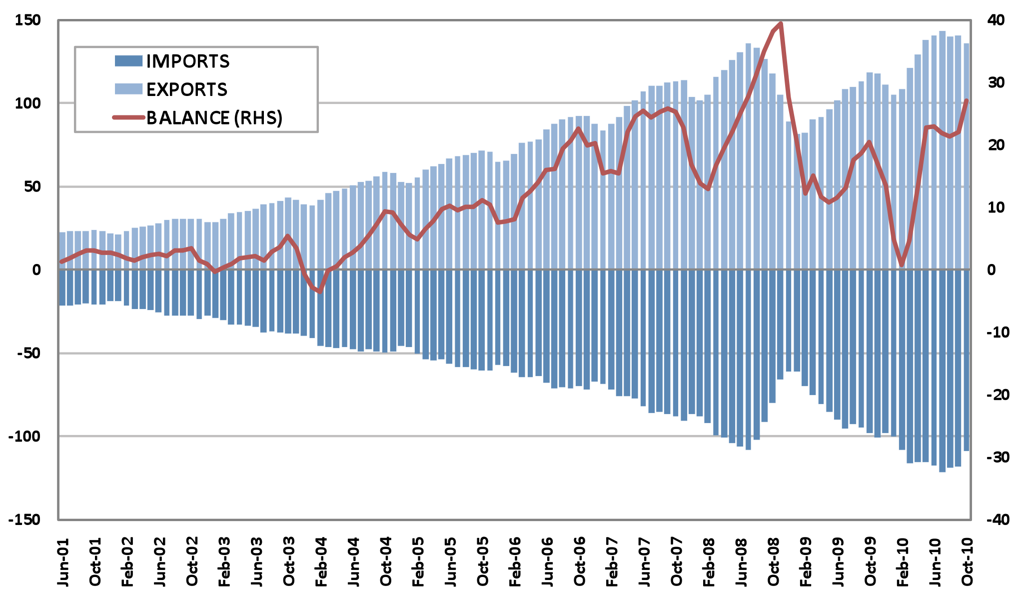
Source: EIU, RHG.

Figure 7. Composition of China's GDP Growth
% contribution to total GDP growth



Source: NBS, CEIC, RHG.

Figure 8. China's Trade Position
USD bn, 3 months moving average



Source: China Customs, CEIC, RHG.

The Limits of the Old Growth Model

The growth contributions China made during the crisis were short-term in nature, and the pattern in growth they delivered (lower net-export dependence) was not locked in for the future through fundamental policy changes. Thus, they cannot be counted upon to contribute to world economic recovery in the future. The strength of domestic investment activity was supported by government guarantees, which are now being unwound and have led to trillions of *yuan* in non-performing loans, which must now be restructured or written off. This is not to say such support wasn't worth it, given the critical social stability it bought; but it is not a natural state of capital allocation. More "normal" investment activity has come back, helping to offset the withdrawal of government-directed lending; but this hand-off has over-relied on property sector exuberance, giving rise to acute and urgent worries about a real estate bubble, which Beijing has to lean hard against. In the third quarter of 2010, 43.2% of all urban FAI went into real estate (figure 2). This is not mission accomplished. And the contribution of diminished net exports to corresponding world growth was an accident of falling world consumption, not an act of Chinese will. As developed world consumption started to recover in the first half of 2010, the old pattern of rising Chinese trade surpluses returned along with it (figure 8).

The frustration arising from the reassertion of patterns of global trade imbalance was clearly evident at the tense November 2010 G-20 Summit in Seoul. The arguments over culpability for these imbalances, which amounted to about $1.7 trillion in 2009 (the cumulative value of trade deficits, which must correspond to symmetrical surpluses), and the appropriate tools to resolve them (whether fiscal policy, exchange rates, tariffs, or other means) are as far from settled as they have ever been following Seoul. But the simple mathematical reality that deficit economies cannot shave their over-consumption without there being a corresponding reduction of surpluses on the other side of the ledger cannot be argued with.

Since the prospect of sustaining U.S. and other high-surplus nation imports is increasingly challenged (let alone continuing to *grow those imports*!), a Chinese model contingent on sustaining the share of net exports in GDP is equally unrealistic for external balance reasons, unless China can somehow convince all the other economies in the world to bear the burden of adjusting net exports down (whether they begin with surplus, like Brazil, or deficit, like India) without China having to share that task.

Even if external balance were not an impediment to Chinese growth as we know it, the internal balance would pull the plug on the machine. Internal balance is the condition of full employment and stable prices. Macroeconomic research by the World Bank (He and Kuijs 2007) and Chinese government economists (see the 12th Five Year Plan), and projections using a growth accounting framework (Perkins and Rawski 2008) describe diminishing marginal returns from investment in China: the amount of product that China is getting out of the investment it puts in is falling, and maintaining the role of investment in the future would demand more and more vast shares of national income. Devouring more capital just to support the kind of industrial activity that exists today means none left to create new jobs in new sectors in the future. In other words, rebalanced growth means more employment-intensive growth.

It is not revealing state secrets to say that the investment and net-export channels of China's GDP growth are both under severe short-term pressure and that the country has not yet implemented the policy reforms necessary to transition growth to a more sustainable pathway.

This is all Chinese economists—officially and privately—talk about.

In sum, for reasons of both external balance and internal balance, the current engines of GDP should not be expected to support global recovery in the medium-term. Rather, it is the transition *away* from current growth patterns that holds the potential for contributing to global growth outside China, and for maintaining strong growth inside in the future as well. So the question is whether the goals of that transition are clear, what the timing could be, and what distribution of growth inside and outside China is likely to arise from the transition.

Contours of Rebalancing

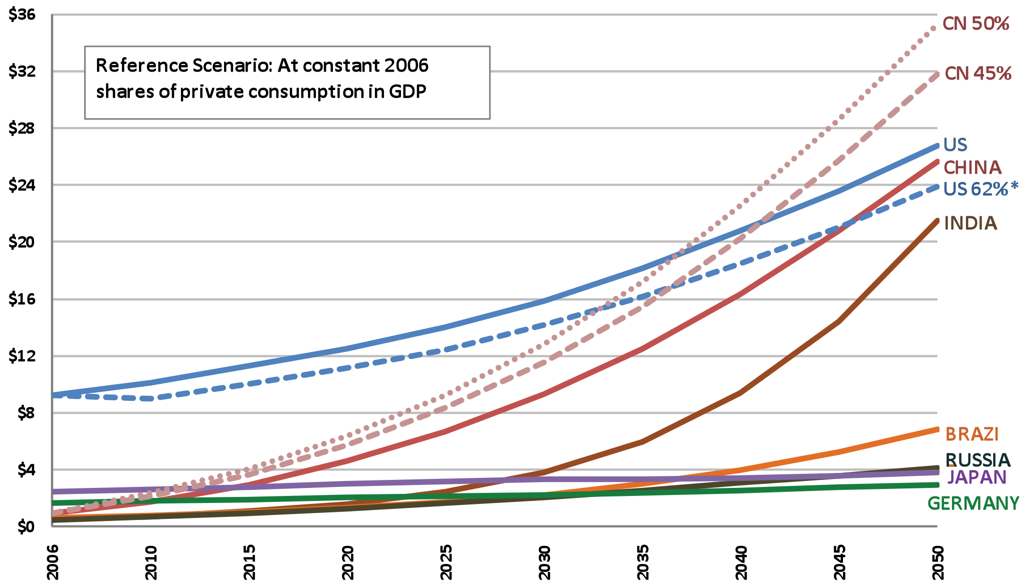
The details of China's potential growth rebalancing are enormously complex, fill large volumes, and take up whole multi-day conferences. This paper can only summarize my view of the likely path ahead for this systemically important country, so as to help take stock of the global economic outlook.

In rough terms, rebalancing will entail a large decline in China's current account surplus, from roughly 5.5% today to 4% soon and half of that level in perhaps five years. In terms of domestic investment flows by industry, a redirection toward service sectors and public services needs to take place, anchored by significant new government consumption expenditure commitments within the coming two years. Both measures would add to consumption activity directly and facilitate stronger household consumption growth indirectly by reducing the precautionary savings imperative that afflicts individuals confronting liabilities for healthcare, retirement, education, and other time-shifted needs. The shift to new horizons for domestic investment (trillions of USD for hospitals, water treatment, environmental remediation, quality control in manufacturing, etc.), the continuation of investment expenditure that is both sensible and needed for decades more (trillions of USD for agriculture upgrading, affordable housing, high-public-return infrastructure not yet built), and the further promotion of domestic consumption (see figure 9) all necessitate diverting labor and capital away from the export sector to serve domestic demand growth.

Standing in the way of this desirable-sounding outcome is the reality that there are winners and losers in any structural adjustment. Shifting investment flows, including through a fundamental reform of the interest rate system, will stoke growth in some firms and industries and diminish it in others. A more consumer-oriented, consumption-led growth story inherently means handing producer surplus back to consumers; but most of China's producers are not accustomed to the notion that the consumer is king and can sue them into bankruptcy if they do not take those consumers seriously. Another way of saying this is that the rosy future cannot eventuate without a degree of political reform that changes the balance of power in China between state and state-owned interests, on one hand, and individuals and private household interests on the other.

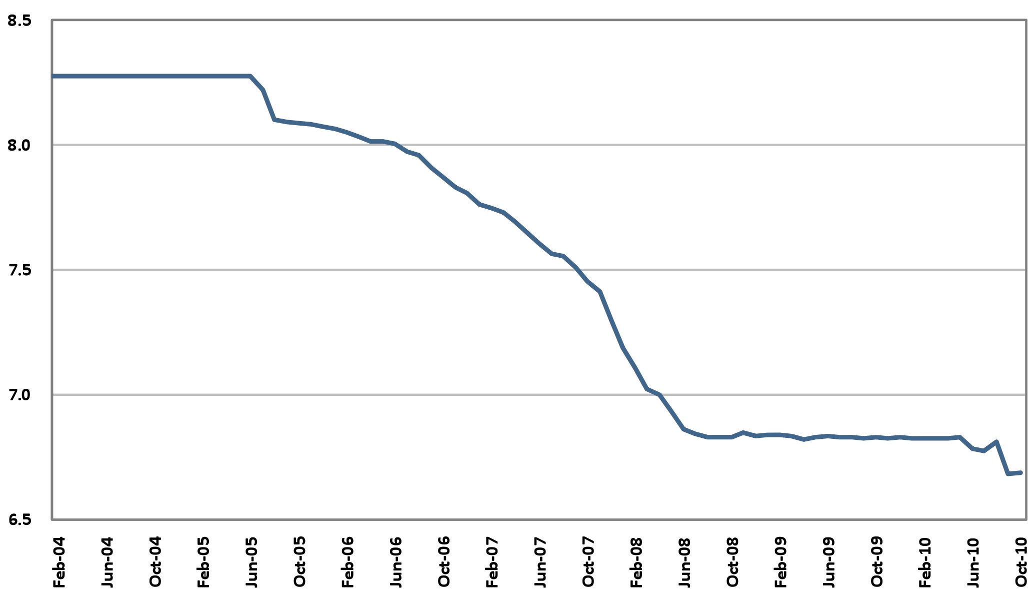
The political anxiety over such a redistribution of power of course delays the advent of rebalancing, especially while the old model is still paying dividends, even if they are diminishing. Some modest initial steps in the direction of the rebalancing described above have been taken, but the more fundamental steps have not yet begun. Consider the question of exchange rate adjustment in this light. A significant appreciation of the *yuan* against trading partner

Figure 9. Private Consumption under the BRICs Scenario
2006 USD trillion



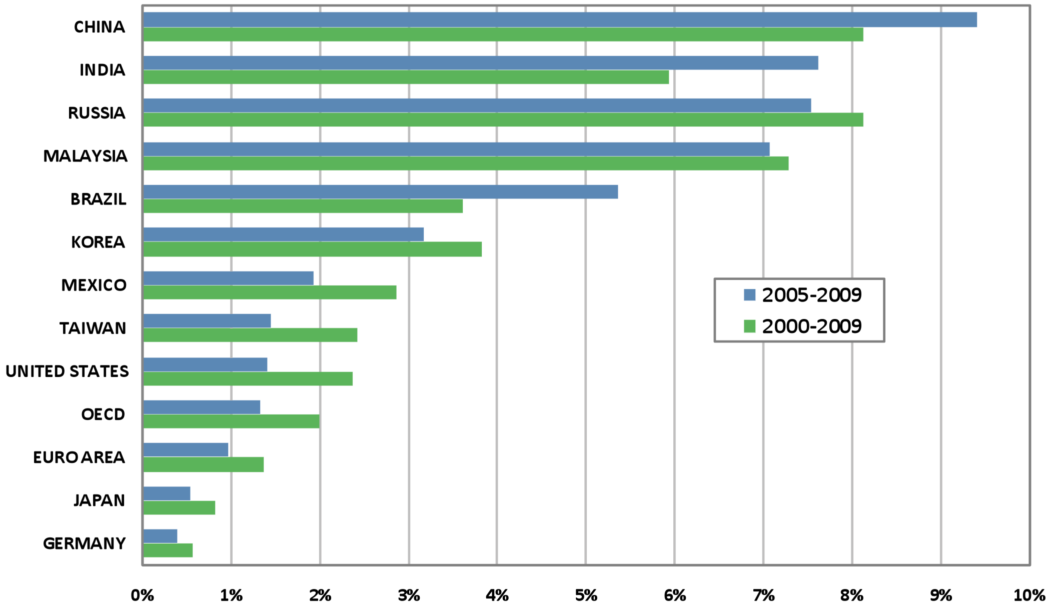
Source: Goldman Sachs (BRICs and Beyond, 2007), EIU, CEIC, RHG, *OECD average.

Figure 10. RMB/USD Nominal Exchange Rate
Daily spot rate



Source: SAFE, RHG.

Figure 11. Annualized Growth of Household Consumption
% real change yoy



Source: EIU, RHG.

currencies would eliminate an effective subsidy currently benefitting the export-oriented sector. As the size of final consumption demand inside China increases, the relative difficulty of dismantling subsidies for the export sector diminishes. But while consumption in China is growing substantially, the size of domestic demand compared to global consumption is still modest (figure 9). China's leadership is reluctant to precipitate a big-bang rebalancing of growth toward domestic demand, preferring to let domestic demand grow up further first, cushioning the adjustment pain. The problem is that China's growth in the meantime is based on producing to meet foreign demand at a time when others want to increase production to *meet their own* demand, and doing so with the help of interventions in currency markets of $1–2 billion a day, on average, to manipulate the prevailing exchange rate (figure 10).

Conclusion

So which scenario is most likely over the medium-term horizon, in terms of the adjustment of China's growth at home and its effect on others' growth prospects? One can expect China to accept the inevitability of shifting export sector income streams into other sectors, as the urgency of U.S. and EU rebalancing of their own growth becomes more acute. I foresee nominal Chinese exchange rate appreciation between 7 and 10% annually for the coming two to three years, combined with factor price equalization at home—inflation—which adds to the effective adjustment. I do not think household consumption can grow much faster than it is currently growing. As shown in figure 11, China has had virtually the fastest household consumption growth in the world for the past decade. That is not bad news, given the significant level this consumption has reached, times 9% a year. However, I do see dramatic potential for higher government consumption growth, thus dis-saving (government is a net saver in China), which would add to China's GDP and make up for diminishing net exports.

I foresee investment at a high level, but declining from trend, yet generating a higher rate of return thanks to better allocation and hence delivering both good capital stock growth and lower depreciation, and paying more interest income to household savers and labor income to workers in new sectors.

I do not expect to see the fruit of all this structural adjustments within two to three years, but I do expect to see public commitment and partial implementation of the policies that would lock in these outcomes in China. A thick haze of ambiguity may well hang over the outlook due to the Chinese preference for gradualism: but the timing will not be entirely up to China on the external side and, given the internal and external sources of inflation built into China's current model, the internal timing is not entirely under Beijing's control either.

This scenario has a number of implications for the rest of the world. First, it implies continued strong domestic investment in property and infrastructure in China, not some sort of radical shifting of capital away from materials-intensive sectors to more intangible services overnight. Therefore soft and hard commodities exports will continue to see growing export volumes and—most likely—pricing. The exchange rate adjustments in this scenario do provide a tailwind for exporters of higher-value-added capital and consumer goods, and services, to China from developed economies, including the United States. They do not guarantee any such performance, however. U.S. export competitiveness has more to do with getting policy and incentives right at home in America than with Chinese exchange rates, though those have been an important aggravator. Reducing U.S. trade deficits will require fiscal and structural adjustment at home, and this is equally true of China.

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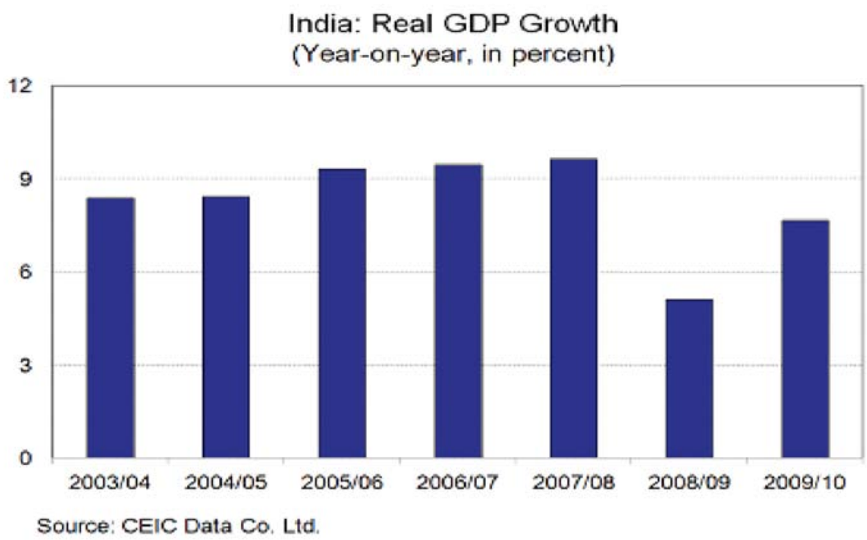
India as a Locomotive for the World Economy

Kalpana Kochhar*
World Bank

Globalization has transformed India into a world economic power. The reforms that began in the early 1990s, which deregulated business and finance and lowered barriers to international trade and capital, resulted in an acceleration of economic growth to among the fastest rates in the world. Thanks to this rapid growth, India now ranks among an exclusive club of trillion-dollar economies. In purchasing power terms, India is now the globe's fourth-largest economy.

Star performer in the global economy in the 2000s

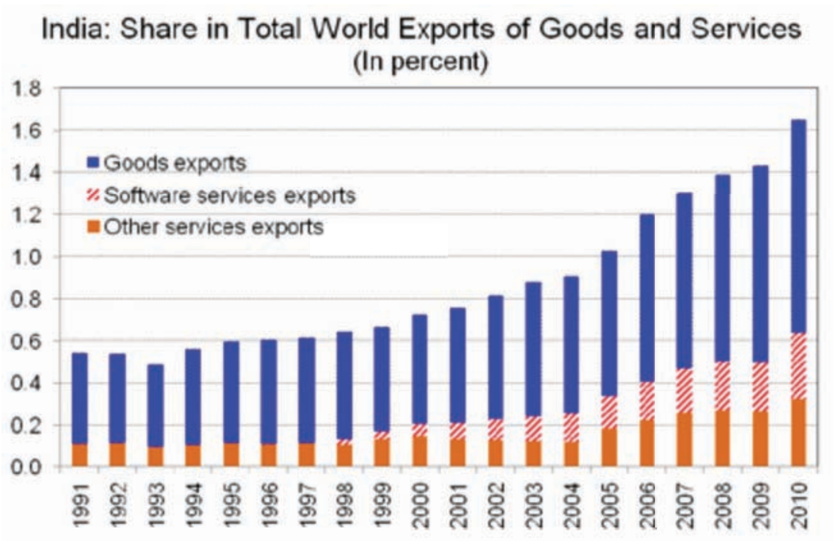


This paper deals with four issues. First, it documents the emergence of India as a globally integrated economy. Next, it discusses some key characteristics of India's growth. It then outlines the impact of the global financial crisis on India and India's policy responses, which drove its rapid recovery. And finally, it presents a brief discussion of India's medium-term growth prospects and the potential for it to be a locomotive for the global economy.

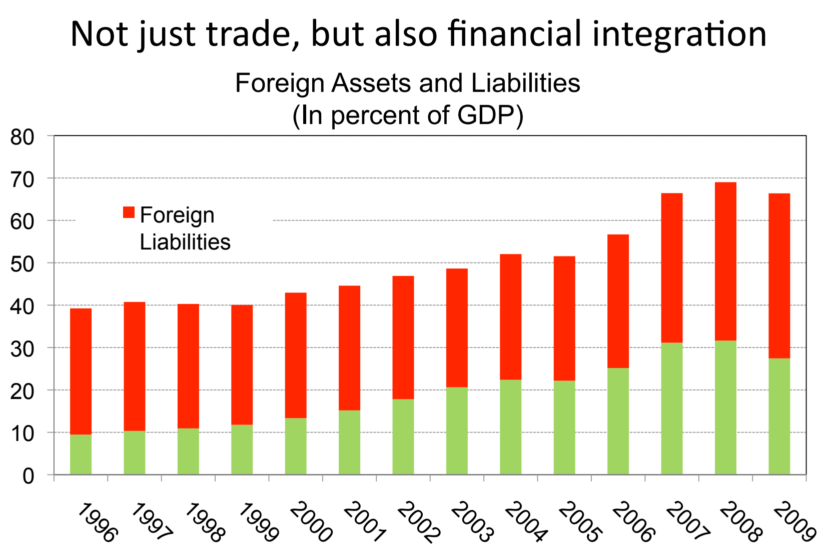
* Kalpana Kochhar is currently the Chief Economist for the South Asia region at the World Bank.

A Globally Integrated Economy

India has integrated rapidly into global markets for goods, services, and capital. The figures below illustrate the rapid increase in India's share of total world exports and its growing integration with global capital markets.

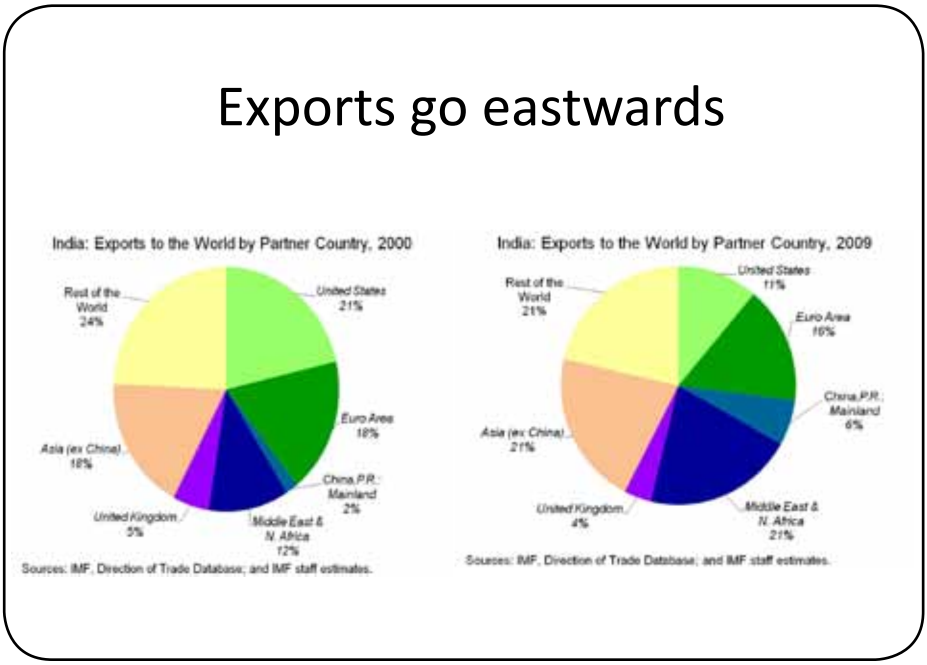


Sources: CEIC Data Co. ltd; IMF, *World Economic Outlook*, and IMF staff estimates.



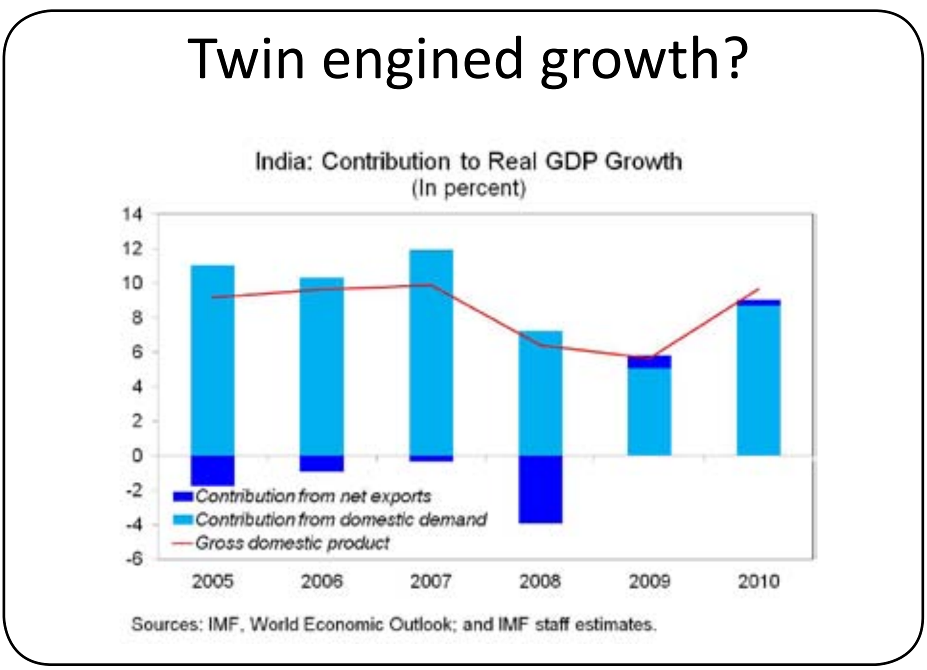
Sources: IMF, *World Economic Outlook; and* CEIC Data Co. Ltd.

Another part of the Indian export story has to do with the diversification of products and markets and the active shift towards the east in India's export destinations.



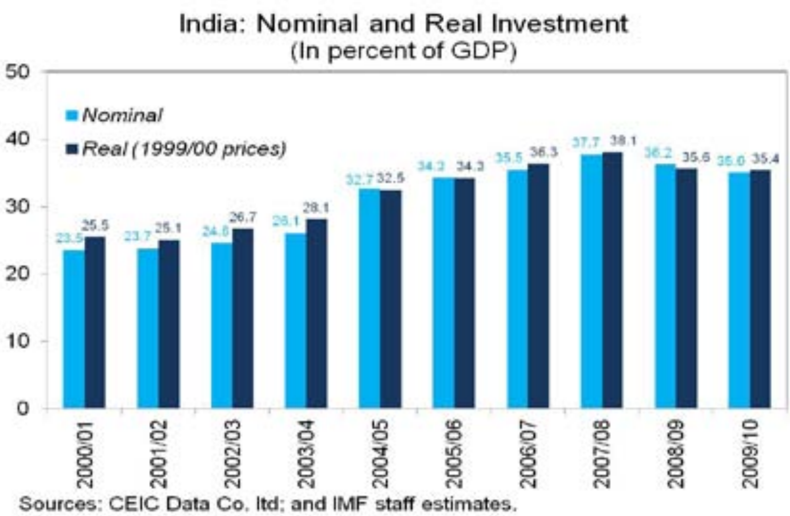
A Story of Twin-Engined, Balanced Growth

An important characteristic of India's growth is that it is "twin engined," fueled both by exports and external demand as well as by domestic demand.

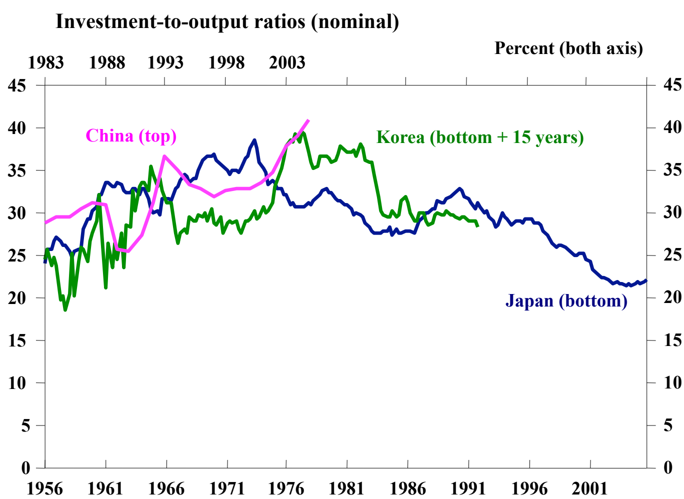


Indeed, the growth takeoff has been mirrored in a sharp increase in investment, which is now in the range of the peaks achieved in the successful East Asian countries during their growth takeoffs.

Investment has surged



And is now as high as in successful Asian countries

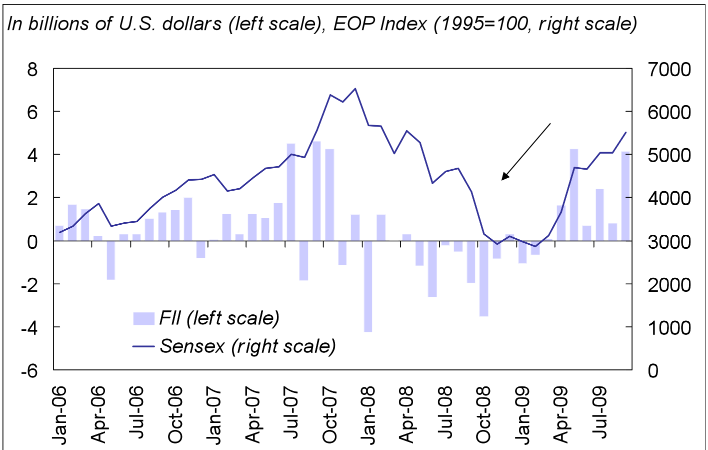


Source: IMF World Economic Outlook, September 2006 and National Sources.

Impact of the Crisis and Recovery from the Crisis

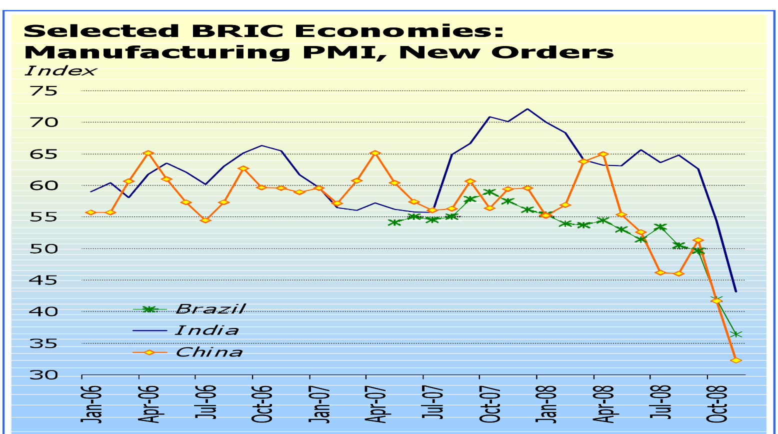
Given its integration with the global economy, it should not be a surprise that India was not spared the impact of the crisis in 2008. Foreign institutional investor inflows plummeted as foreigners retreated, in large part to cover losses in other markets, and the stock market fell sharply. Not unlike its emerging-market counterparts, India was affected through the trade channel too, with new orders collapsing sharply.

Financial turmoil hits India...



Source: Bloomberg LP.

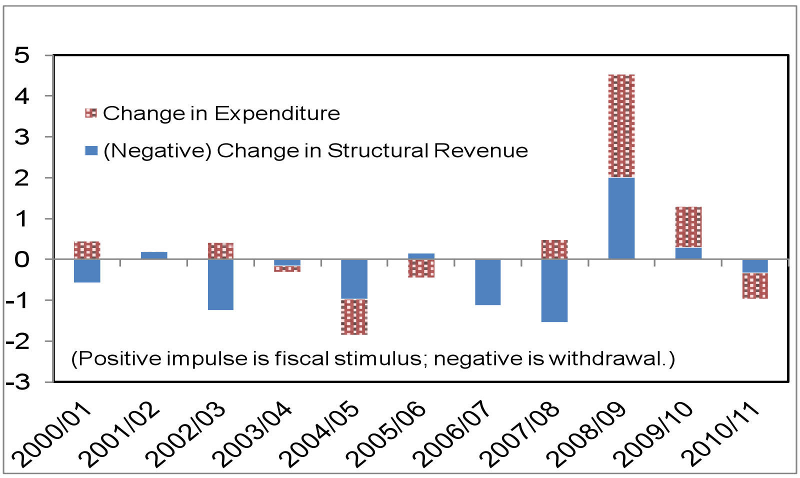
India affected by the trade channel too



Sources: Bloomberg LP; and ABN-AMRO Bank.

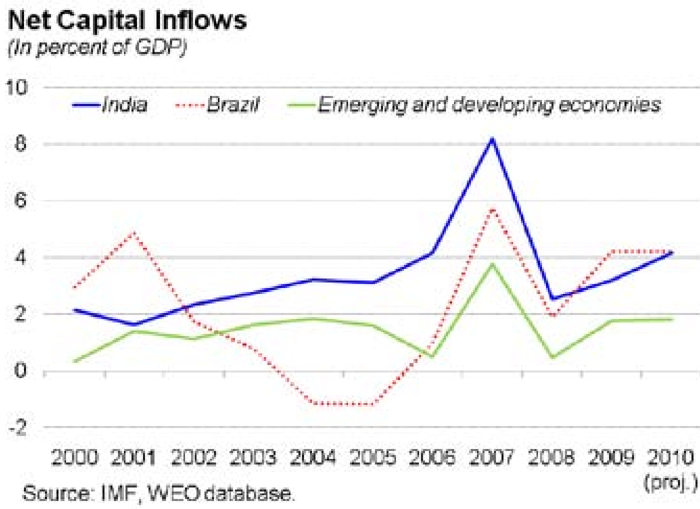
The authorities' response to the crisis was swift and appropriate. The RBI took immediate steps to pump liquidity into the banking system, cutting interest rates and lowering the cash reserve and statutory liquidity ratios. In an effort to counteract the "sudden stop" in capital inflows, the RBI also raised interest rates on deposits by nonresident Indians in India and eased controls on capital inflows. Steps were taken to enhance coordination among regulators of different parts of the financial system to provide early warnings of distress in the sector. And the election-related pump priming announced in February 2008 and implemented starting April 2008, along with additional fiscal stimulus measures implemented after the crisis, served to provide important support to domestic demand in the immediate aftermath of the crisis.

Fiscal stimulus–good luck

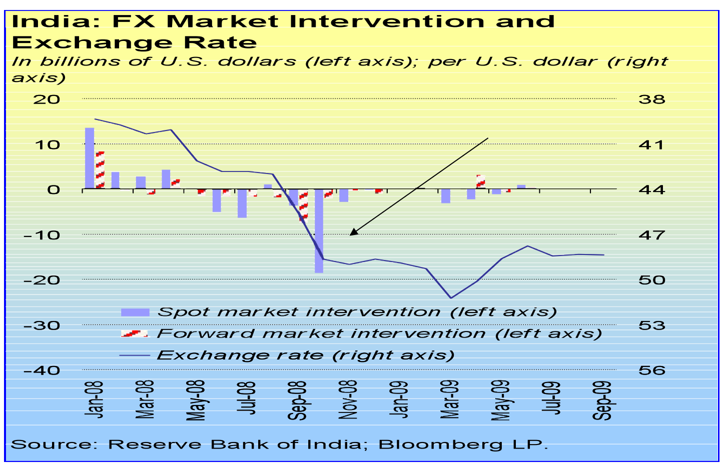


A final important point is that the authorities were pragmatic in the management of the exchange rate. They recognized the futility of fighting what had turned into a global flight home and let the rupee depreciate with the capital outflows.

Big swings in capital flows…

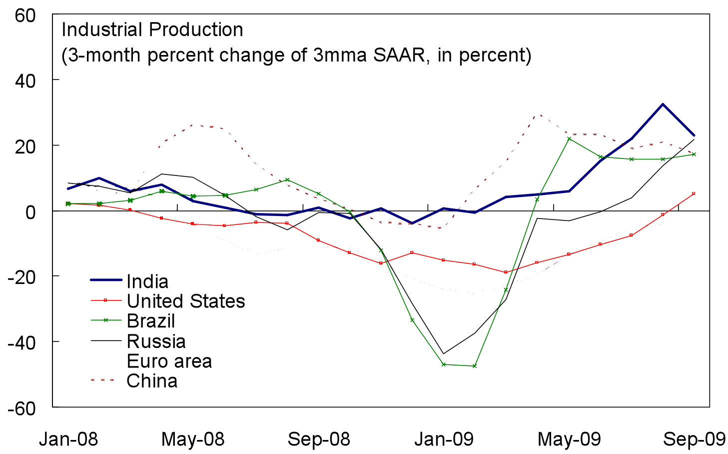


Pragmatic exchange rate management…



As a result of the policy response and the underlying characteristics of India's growth, the economy experienced only a shallow downturn followed by a brisk recovery.

Resilient India—shallow downturn, early recovery



Source: CEIC Data Company Ltd; and IMF staff calculations.

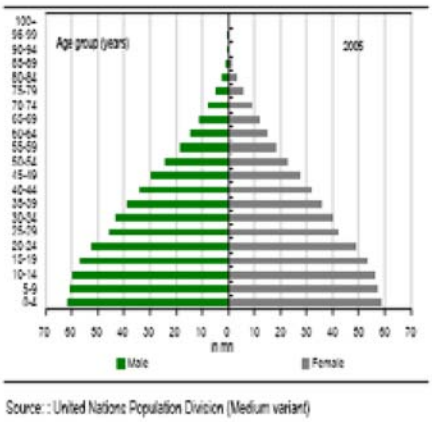
What Does the Future Hold for India and India's Role in the Global Economy?

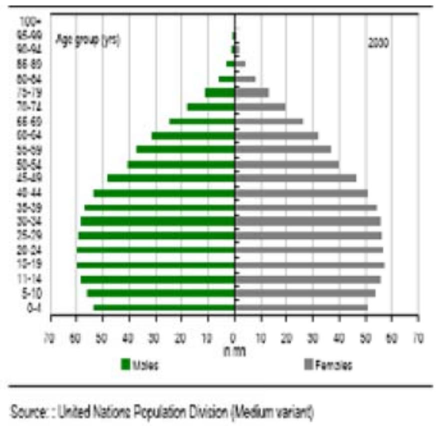
The most positive trend facing India is its demographic composition. In 2020, the median age in India will be 28 years compared with 49 in Japan, 37 in China, and 45 in Western Europe. India will be home to a large number of working-age people, and judging by past experiences in other countries that have experienced similar demographic changes, there is considerable scope to reap a sizable demographic dividend—that is, a sustained increase in growth along with changes in the age structure of the population towards the working age.

However, the achievement of this demographic dividend is by no means a foregone conclusion. India faces major challenges in overcoming constraints to growth to put itself in a position to reap the demographic dividend. The most pressing challenge is the one posed by the major gaps in physical infrastructure. Why do infrastructure gaps matter? They matter because they are a deterrent to the development of industry—which has the greatest potential to absorb the expected increases in the labor force. Infrastructure quantity and quality also matter for inclusive growth, as corroborated by empirical studies using data from Indian states.

The authorities in India have recognized this fact and have given infrastructure investment their highest priority. They aim to virtually double infrastructure investment over the next five years to close to 9% of GDP, implying a total investment in infrastructure of around $1 trillion. This is an important first step, but many challenges remain in implementing this plan. Foremost amongst these are those related to financing the massive planned investment. India has a high level of private savings, and the demographic trends will certainly help sustain these trends.

Favorable demographic transition underway

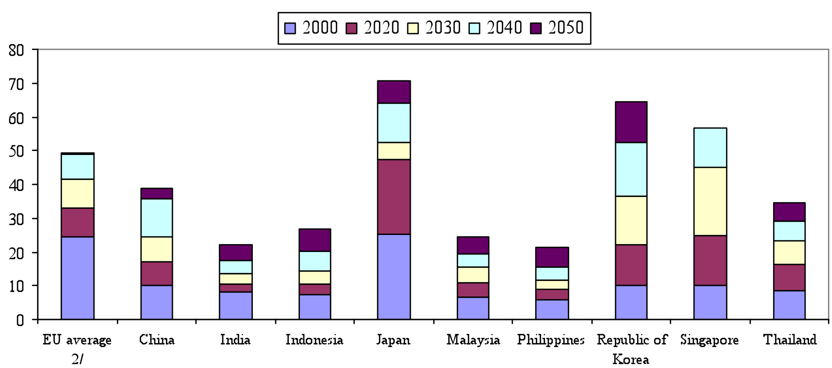




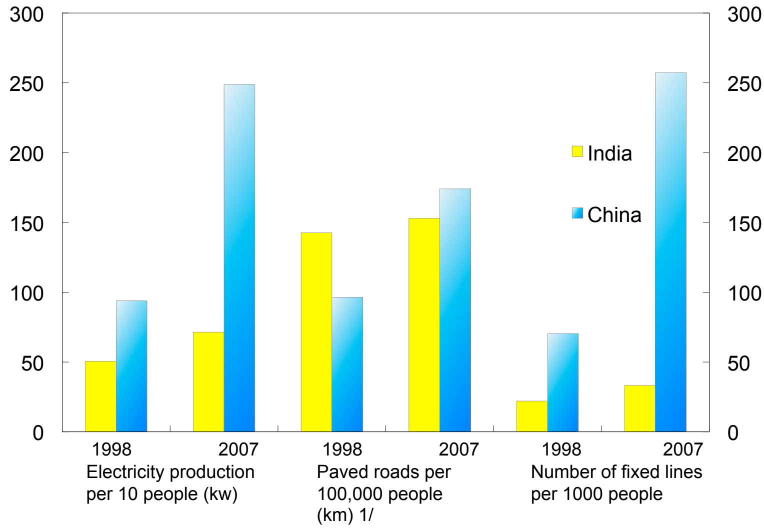
And will continue for at least 4 more decades

Chart 1

Old Age Dependency Rate in Asia, 2000-2050 1/



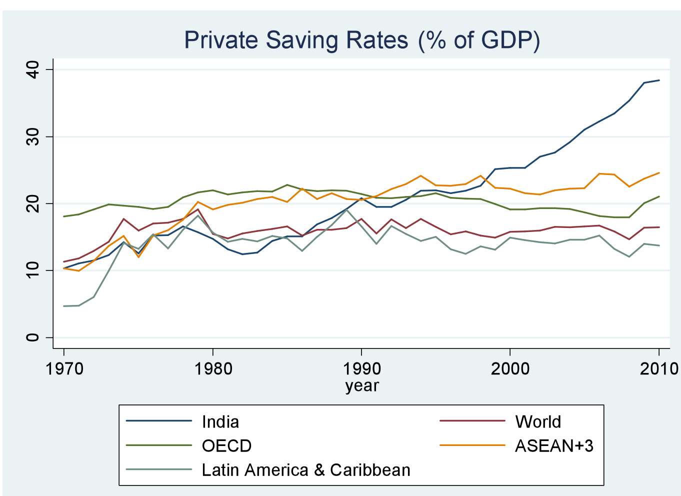
Major Infrastructure Gaps



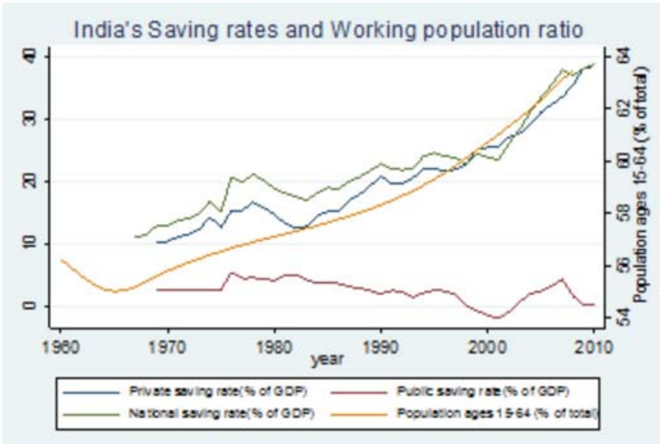
Source: World Development Indicators.
1/ China data is for 1996 and 2007, and India data is for 1998 and 2002.

But the persistently high fiscal deficits have preempted these savings, leaving little room for private investment in infrastructure. Strong efforts to reduce the fiscal deficit are urgently needed. Much recent progress has been made in raising the revenue/GDP ratio, and although more can be done here, reforms of expenditures are lagging. There is therefore an urgent need to reform wasteful and unproductive subsidies that do not benefit those that need it and where the design of the schemes has outlived its usefulness as India gets closer to middle-income status.

Financing Infrastructure–private savings high

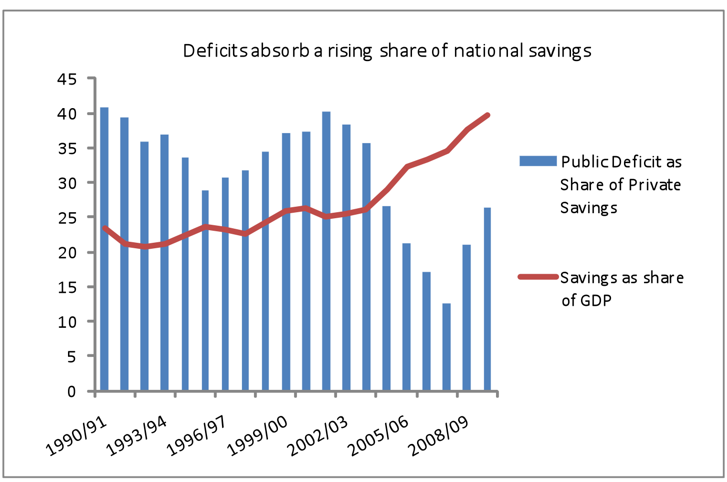


And will likely continue to rise with demographics



In addition, India needs broader sources of finance. The ingredients for developing India's domestic financial and capital markets are well known, as laid out in a series of expert reports over the past several years. A key ingredient is developing the domestic institutional investor base: pension and insurance funds. And better-developed financial markets are also needed to intermediate flows from abroad.

But they are preempted to finance the large fiscal deficits



Conclusion

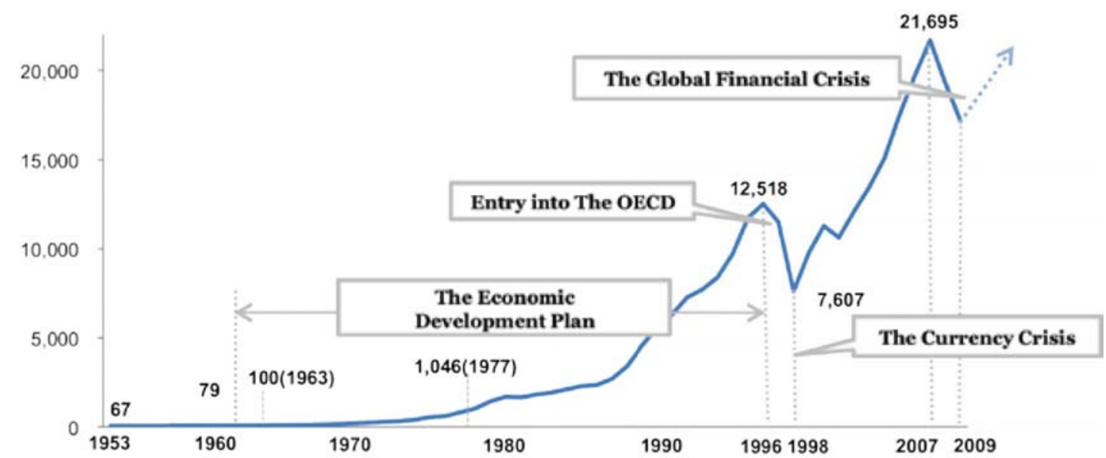
India's favorable demographics, the fact that growth is balanced between external and domestic sources and the diversified export market base are all positives for sustained medium-term growth. But by themselves, they are not enough. Efforts need to be made to rapidly build up infrastructure without building up risks to the economy, so that growth can be truly inclusive and India can fully reap the massive demographic dividend that is potentially embodied in its swelling labor force.

The Korean Economy: Status and Tasks

Min Chang
Korea Institute of Finance

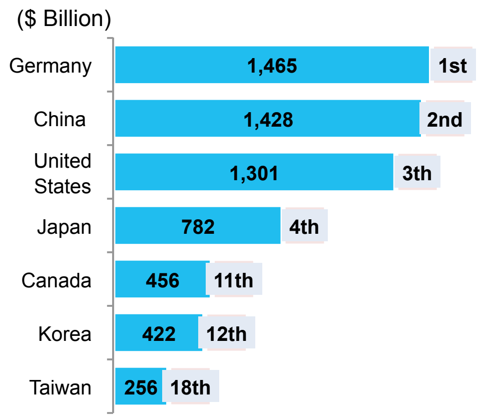
Stretching back to its 1960 economic development plan, Korea has managed nothing short of remarkable growth. Lacking resources and having only a tiny domestic market, Korea pursued a manufacturing and export-led growth model and made a zealous push for education that produced the skilled labor instrumental for the efficient operation of large-scale production systems. Alongside this, Korea wisely got past the political instabilities and troubles following Korea's liberation from Japan in 1945 and gradually moved towards a democratic system, which also helped lead to the progression of economic development known as the "Han River miracle." Buoyed by industrialization and democratization, Korea's per capita national income went from $79 in 1960 to $21,695 in 2007, right before the onset of the global financial crisis. Korea in turn became an OECD member nation in 1996, the first case of a developing economy joining the ranks of the advanced economies through successful development—a meaningful achievement in terms of world economic history.

Per Capita National Income (US$)



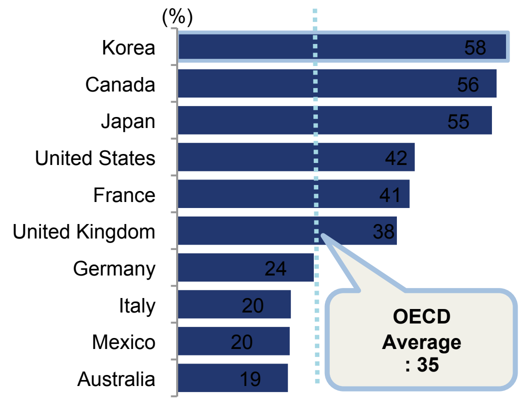
Source: Bank of Korea.

Size of Exports (Ranking)



Source: WTO.

The Tertiary Education Rate



Source: OECD.

Looking at the Korean economy today, it has secured its place as a mid-sized nation with a top-tier economy. As of 2008, Korea's GDP was ranked fifteenth worldwide, approaching $1 trillion, and twelfth worldwide, with $400 billion in exports. In terms of human resources, the population is reaching 50 million and tertiary school finishing rates of 58% are far above the OECD average of 35%.

Industrial competitiveness is also evenly balanced between traditional manufacturing, which has benefited from the long-held export-led growth policies, and new technology industries focused on IT. Korea's shipbuilding, display production, mobile phones, semiconductors, and automobiles are globally competitive and drive the Korean economy. And thanks to Korea's substantial science and technology R&D expenditures, it ranked fourth in 2007 in patents, after the United States, Japan, and China. Considering that Korea has been highly visible in the areas of culture and sports as well, Korea can be said to have built a secure position in various areas, from the economy to science/technology, and from culture to sports.

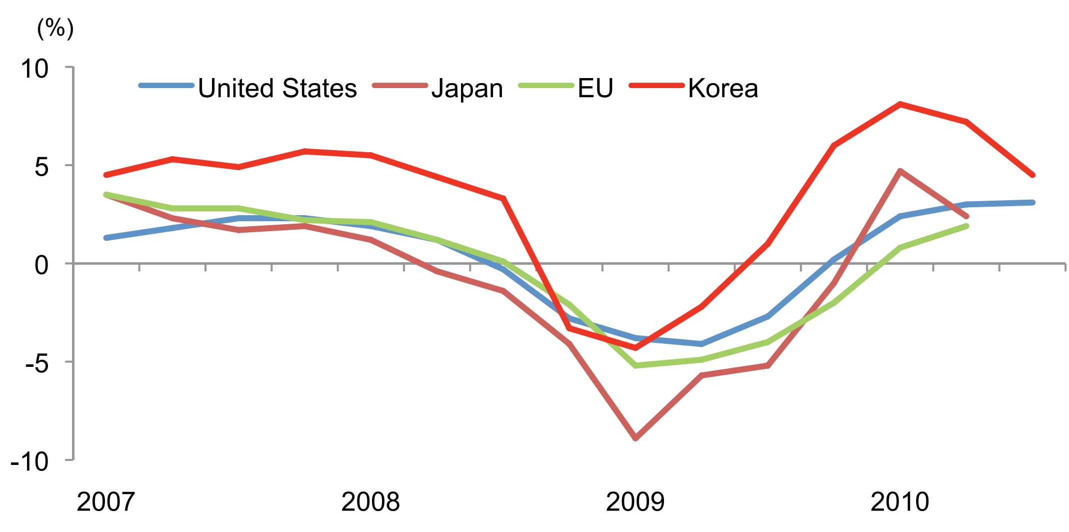
The Market Share of New Technology Industries (%)

	2005	2006	2007	2008	2009
DRAM	47.3	44.8	49.0	49.6	61.0
Mobile phones	19.4	18.1	20.7	24.5	30.6
Automobiles	4.3	4.5	4.8	5.1	7.3
Shipbuilding	35.6	35.2	35.6	33.8	34.4
TV	19.6	24.3	28.2	33.7	36.1

Source: Samsung Economic Research Institute.

Moreover, as the G-20 host country in 2010, Korea has taken a big step forward in terms of economic diplomacy, playing a bridge role between emerging and advanced economies. The 2010 G-20 Summit in Seoul produced a major agreement on currency revaluations and the adjustment of balance-of-payments surpluses to alleviate the imbalances that were at the root of the global financial crisis. In addition, with greater IMF quotas allocated for emerging market countries, the long-running dispute over the reform of international financial organizations took a big leap forward. Korea's experience in rising from a developing country to the ranks of the advanced nations was a major help in producing such agreements and coordinating understanding between emerging and advanced economies. And having recent experience as both an emerging and an advanced economy was undeniably of immense help in allowing Korea to see both sides' issues and concerns.

Growth Rates of Major Economies



Source: Bloomberg, Bank of Korea.

In this respect, Korea's rapid recovery from the global financial crisis also worked as a factor elevating Korea's role on the issues of ushering in a new global financial order and constructing a global financial safety net. The Korean economy grew 0.2% in 2009, as international financial markets contracted and global demand fell alongside the global financial crisis. However, based on its experience during the 1997 currency crisis, Korea responded to the credit crunch in the financial markets with aggressive monetary and fiscal policies, injecting liquidity, and restructuring insolvent firms. As a result, Korea is set to achieve growth in the 6% range in 2010. This will be the highest growth rate in the OECD, and has occurred as exports have been buoyed by robust growth in export-market emerging economies, and as domestic demand has recovered from soaring capital investment and the continued recovery of private consumption.

Next year as well, the Korean economy is anticipated to see growth near its potential levels in the mid-4% range on the strength of the continued recovery of the global economy—led by emerging markets and by the increasing vigor of Korea's private sector. Looking at expenditures, private consumption is expected to rise substantially on the strength of a falling exchange rate as well as rising real purchasing power from better income thanks to the economic recovery and rising asset prices. Capital investment, despite growing a robust 25% in 2010 year-on-year, should revert to the more typical 6% range, as IT companies expand investment. Conversely, it is harder to foresee a recovery in construction investment, since the longer-term outlook for the housing market has been cloudy amid a slowdown in private home construction. The exports that drive Korea's growth, however, should see robust growth next year as well. This is based on further robust growth projected for emerging markets, despite the potential for more delay in the recovery of advanced economies, as well as considerable uncertainties over currency valuations and other issues.

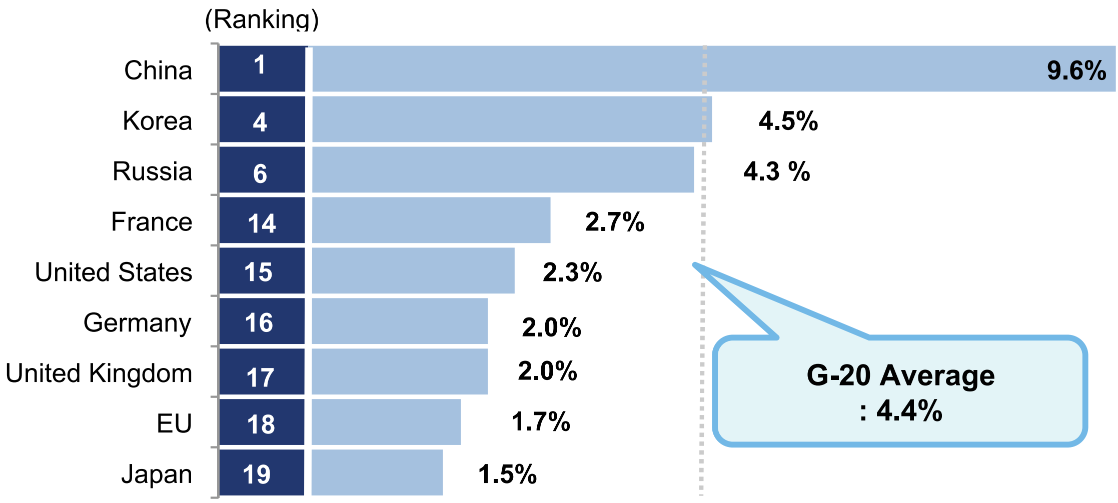
Economic Growth Forecast (%)

	2008	2009	2010	2011
GDP	2.3	0.2	6.0	4.4
Final Consumption	2.0	1.3	3.6	3.5
(Private Sector)	(1.3)	(0.2)	(3.8)	(3.4)
Gross Fixed Capital Formation	△1.9	△0.2	7.8	2.8
(Construction)	(△2.8)	(4.4)	(0.0)	(0.7)
(Equipment)	(△1.0)	(△9.1)	(24.6)	(6.6)
Total Exports	6.6	△0.8	13.3	9.0
Total Imports	4.4	△8.2	16.8	10.3

Source: Bank of Korea; KIF forecasts beyond second half of 2010.

Even looking at longer-term conditions, the Korean economy has a high chance of getting back to potential growth levels, assuming no unforeseen variables. Above all, Korea's largest export market, China, is highly likely to continue on a robust growth track, which should have a positive effect on a Korean economy becoming ever more tilted towards exports to China. The high competitiveness of Korea's leading export industries, such as IT and automobiles, also suggests that Korea will maintain its export competitiveness. Furthermore, as the domestic

G-20 Countries' GDP Forecast in 2011



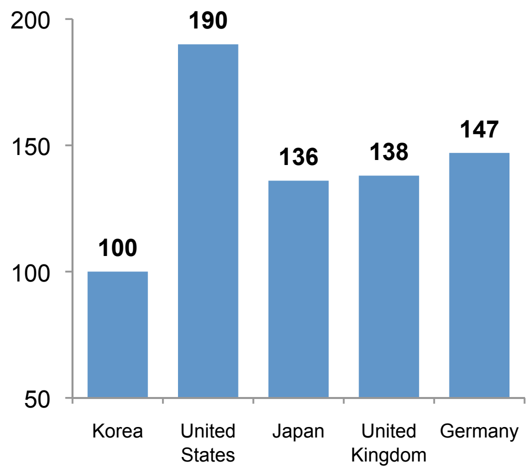
Source: IMF.

market gradually matures based on service industries, this is anticipated to bolster the economic growth base. These domestic and external economic conditions hint that the Korean economy is highly likely to continue on a stable growth track.

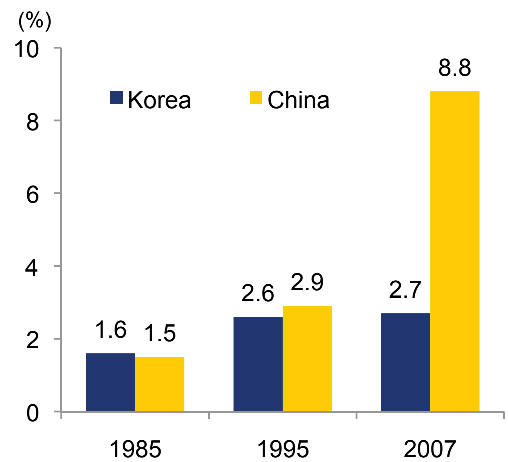
However, behind these projections lie a lot of uncertainties. The biggest is over whether the Korean economy can fully complete its transition from emerging to advanced economy. In spite of the economic development thus far, Korea still has slow productivity gains from its lack of original technology, and a persisting technology gap with advanced economies, making it hard to compete. Meanwhile, China and other emerging markets are encroaching on Korea's export competitiveness with low-cost products. There are concerns that if Korea is not careful, it could be facing a "Nutcracker" situation.

However, even before genuinely ascending to the ranks of an advanced economy, the symptoms of being an advanced economy have already begun to appear, implying that the path forward will not be all smooth sailing. As time passes, the slump in investment, low birthrates, and a rapidly aging population may considerably hamper the dynamism of the Korean economy. Of course, such things are inevitable consequences of development. As consumer spending growth slowed and the gross capital formation ratio fell off sharply during the 1990s, economic growth entered into a downward trajectory. Final consumption grew around 8% during the 1980s, but this fell to the 5% range in the 1990s and down to the 4% level in the 2000s. Average annual gross capital formation growth also fell from around 14% in the 1980s, to 5% in the 1990s, and just 3% in the 2000s. As a result, annual economic growth went from 9% in the 1980s to 6% in the 1990s to 4% in the 2000s. As manufacturing has transferred production overseas

Productivity of Major Economies ('96-06)



Korea/China Share of Global Exports



to cut costs and develop new markets and as Korea has struggled to uncover new growth industries, capital investment has been consistently falling. Declining labor supply from changing demographics and less accumulation of human and physical capital could act as factors pushing down Korea's potential growth rates.

GDP Growth and Total Factor Productivity (TFP) Growth

Period	GDP Growth	Capital Growth	Labor Growth	TFP Growth
1985-90	9.2%	11.3%	2.3%	3.8%
1990-95	7.5%	11.4%	2.5%	1.9%
1995-00	4.3%	6.6%	0.1%	1.8%
2000-05	4.5%	4.7%	0.0%	2.8%

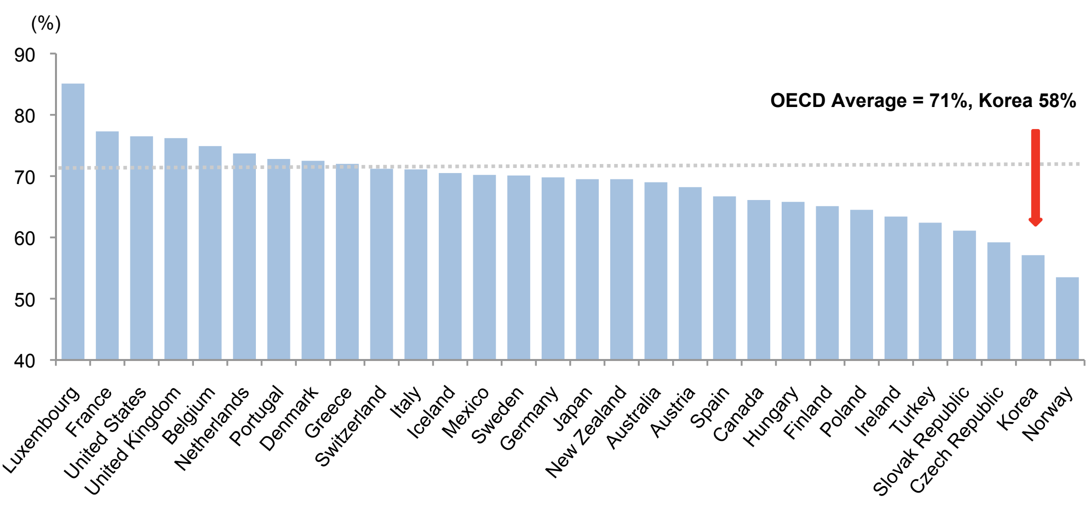
Source: Bank of Korea.

In terms of Korea's industrial structure, domestic demand has been weak, as export-led growth has persisted for a long time, deepening reliance on the external sector. In most advanced economies, services constitute over 70% of GDP, but this figure has not reached 60% in Korea yet. With this immaturity of domestic-oriented industries, the development of services able to provide many jobs has been inadequate, and intermediate materials industries have been tepid, leading to persistently weak linkages between growth and jobs. As a result, the so-called jobless growth phenomenon of limited employment gains, despite high levels of economic growth, continues to become more apparent.

In terms of the structure of service industries in Korea, consumers are increasingly frustrated by the fact that high value-added sectors such as law, healthcare, and education enjoy excess returns thanks to regulatory entry barriers. The OECD's Korea Report (2008) ranked Korea's non-manufacturing regulations as fifth-strictest in the OECD, and found entry barriers in around a third of Korea's 543 service industry sectors. In contrast, the wholesale/retail, food and beverage, and lodging industries have excessive entry low returns, aggravating social instability. The result is that Korea's service industry labor productivity is well below the standards of major advanced economies. Based on 2006, if the value-added generated by Korea's service industry workers is set at 100, the same number would be 227 for the United States, more than double that of Korea, and 192 in France. Korea's manufacturing labor productivity score of 172 also can give an idea of how low service industry productivity is. In this environment, as market opening puts long-protected domestic sectors in competition with foreign firms, their poor competitiveness will further stunt domestic sector growth and further exacerbate its gap with the export sector.

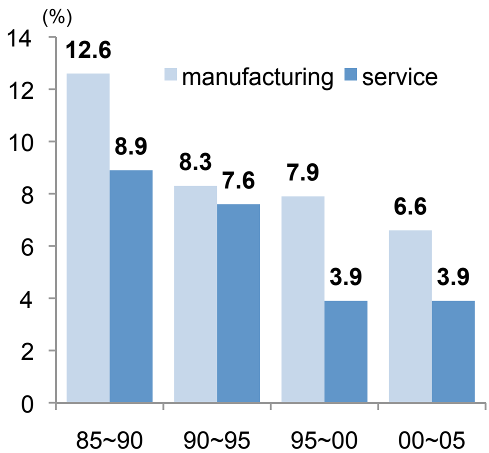
In addition, export-led growth has relatively impaired the development of SMEs (small and medium enterprises) by fostering large conglomerates that focus on manufacturing exports.

Services as Share of GDP in OECD Countries



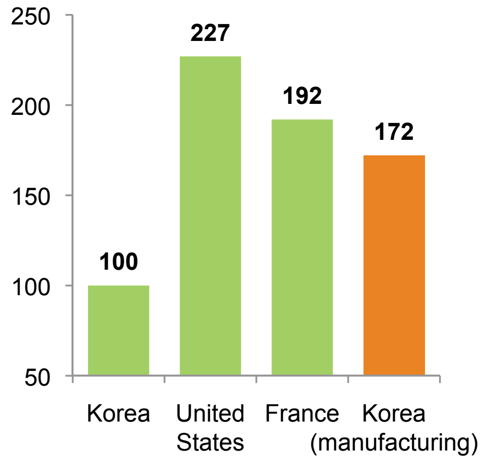
Source: OECD.

Manufacturing/Service Industry Growth



Source: Bank of Korea.

Service Industry Productivity (2006)



Source: OECD.

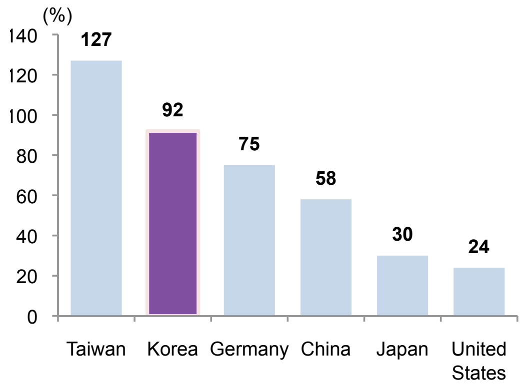
Based on 2002 figures of countries' labor productivity of SMEs versus large companies, Korea's figure of just 34.5% shows a major gap compared to the U.S. figure of 58.3%, the Japanese figure of 53.2%, the German figure of 63.1%, and the Italian figure of 65.1%.[1] SMEs are less productive and less capable of paying wages, which acts as an obstacle to hiring highly skilled labor or professionals, which can reinforce a vicious circle of declining productivity. As Korea's industrial structure gradually moves towards IT and other industries that are poor at job creation, if large companies' share of employment falls, we would see further polarization between workers at large enterprises and workers at SMEs.

Above all, the persistence of an export-led growth model deepens Korea's external reliance and makes it quite vulnerable to external shocks. Korea's trade/GDP ratio of 70% as of 2007 was far higher than the United States' 23%, Japan's 31%, or France's 45%. As a result, when external demand contracted rapidly during the recent global financial crisis, Korea's economic growth plunged even though Korea's financial industry did not take a direct blow.

Shifting from an export-led to domestic-led economic structure will not only be a challenge, but, given Korea's limited domestic market, in all likelihood is not so desirable. Therefore, exports may be emphasized going forward as well, but only alongside policies to strengthen the domestic market. Considering that China, Korea's top export market, should grow for a considerable period ahead, the chances are good that Korea will continue to become more reliant on it. Yet while China's growth does benefit Korea, its negative potential impact may as

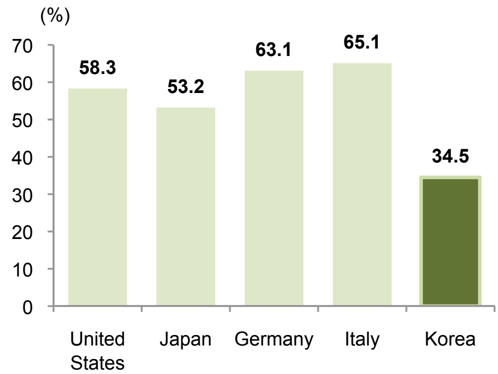
1 KDI, "Korea's Economic Development Path after the Global Financial Crisis" (2009).

External Dependence by Country (2008 basis)



Source: Korea Development Institute.

Levels Labor Productivity of SMEs vs. Large Companies



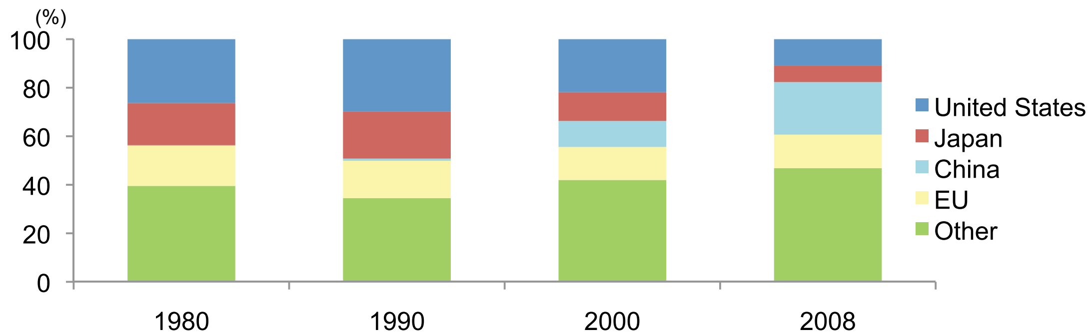
Source: Korea Development Institute.

well. Specifically, if Korea's growth is largely determined by how China is doing, this inflates the risk that the considerable vulnerabilities that are still present in the Chinese economy could be readily transferred to Korea.

Korea is also not taking sufficient steps against future risk factors such as the low birthrate, aging population, and climate. Korea's current birthrate of 1.2 is the lowest in the world, while the rate of aging is much faster than in other advanced economies. An aging society where 14% of the population will be over 65 is anticipated by 2018, and an aged society is expected by 2026, in which 20% of the population is over 65. As a result, the 65-and-older demographic will rise from 13% of the economically active population in 2005 to 22% by 2020 and 72% by 2050. In advanced economies, this ratio was higher than Korea's in 2005 and 2020 at 23% and 29%, respectively, but this gradually shifts, with the 2050 figure of 45%, well below that of Korea. This rapid aging suggests that Korea's economic dynamism in terms of manpower will gradually fall off faster than in advanced economies. As the elderly dependence ratio rises and the savings capacity falls, the Korean economy's ability to accumulate capital could be eroded. The aging demographic is thus expected to bring about structural changes, such as a drop in the economically active population and shifts in housing demand.

Along with this, the polarization of the economic system brought about by further growth and internationalization is an area worthy of attention. As the fruits of economic growth become allocated unevenly, this will make divides among households and companies more distinct. After the 1997 currency crisis, Korea's employment programs were altered to weaken the concept of lifetime employment, expanding the gap between contract and regular employees, and, in turn,

Korean Exports by Country



Source: The Korea International Trade Association.

the income gap between households, intensifying income inequality. Further, as mentioned above, the long-pursued export-led growth model helped widen the differences between exporters and domestic-focused companies, as well as the wage gaps between such companies' workers. This means that the gap has widened between export-focused large enterprises and SMEs focused on the domestic market. This polarization has coincided with the poor employment conditions and fall in jobs for the youth since the currency crisis, to bring about an erosion of the middle class and compromised social stability.

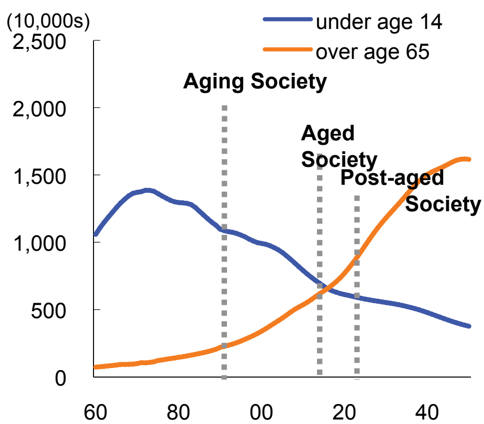
Beyond this, energy-use regulations are expected to tighten from climate change amid the intensifying global rush to secure resources, which is highly likely to pose an obstacle for the Korean economy. Korea lacks natural resources and is heavily reliant on energy imports, but its industrial structure is quite energy-intensive. This makes Korea highly vulnerable to an energy crisis, so making the economy more energy-efficient will be imperative going forward.

The changes in the world economic environment following the global financial crisis will also affect Korea greatly. Most countries saw a fall-off in their potential growth rates as they went through the crisis. The economic slowdown from the crisis was a more severe and longer-lasting shock than a typical slowdown, and also harmed growth potential, making countries unable to get back to pre-crisis levels.[2]

Considering the massive damage incurred by the United States and other advanced

2 Cerra and Saxana (2007).

Future Aging Patterns



Pace of Aging by Country (year)

Country	Aging →Aged (7%→14%)	Aged → Post-aged (14%→20%)
Korea	**18 (2018)**	**8 (2026)**
Japan	24 (1994)	12 (2006)
U.S.	73 (2015)	21 (2036)
Germany	40 (1972)	37 (2009)
France	115 (1981)	39 (2018)

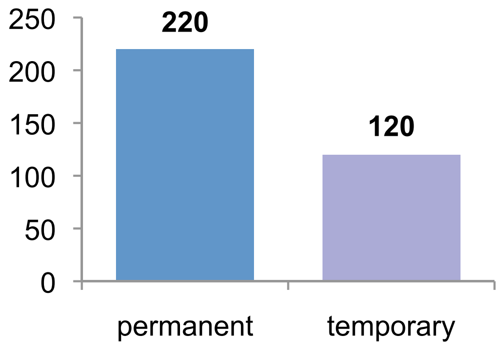
Source: Statistics Korea.

economies from the recent crisis, such economies' growth potential underwent a relatively major hit. Also, as they bring down the household sector's excessive liabilities, which was a core cause of the crisis, such economies' household sectors will be shifting from deficit to surplus, which means that there will be limits as to how much the United States can act as the world's consumer. This could hamper growth momentum in an export-dependent country such as Korea. Korea has been diversifying its export market, with China now Korea's biggest customer, but without demand from the United States and other advanced economies, Korea's export-dependent model will place major limitations on growth.

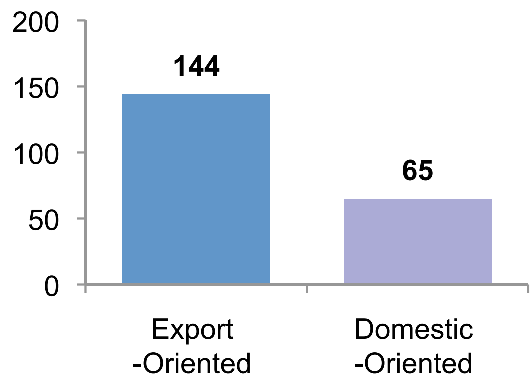
The high probability of a fundamental shift in international capital flows is also a noticeable change. With advanced economies expected to need a great deal of time to truly get back on track, their post-crisis policy measures to tackle stubborn employment conditions and raise productivity will be quite limited. With fiscal deficits reaching their ceilings, fiscal policy is no longer much of an option, while policy rates are already near zero levels. Owing to such limitations, governments in advanced economies have been relying on quantitative easing and currency revaluations to boost exports. However, with these QE policies, advanced economies' private sectors are, unlike in the past, stockpiling surplus capital, which should lead to a lasting abundance of global liquidity. As a result, global liquidity is highly likely to continue to flow into emerging-market treasury bonds in search of appropriate yields as well as stability.

If capital continues to flow into emerging markets, this will increase the upward pressure on

Comparison of Regular/Non-Regular Employees and Exporters/ Domestic-Oriented Firms

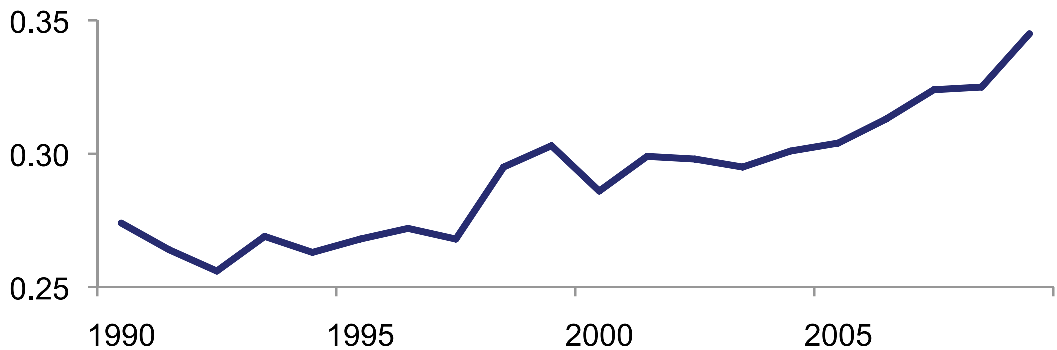


*wages (10,000 won, 2009.8)



* added value per employee (manufacturing, million won, 2008)

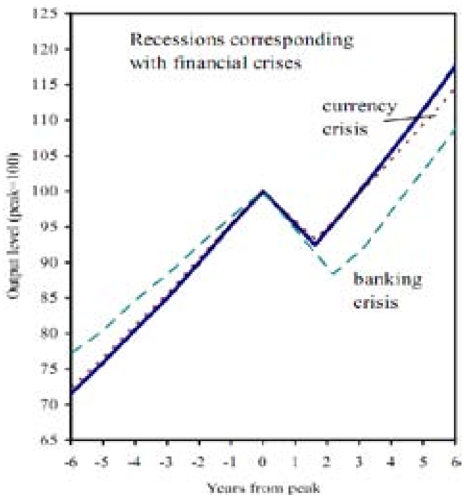
Gini Coefficient



Source: Statistics Korea.

Pre-/Post-Crisis GDP Trends

<World Bank Data Findings>



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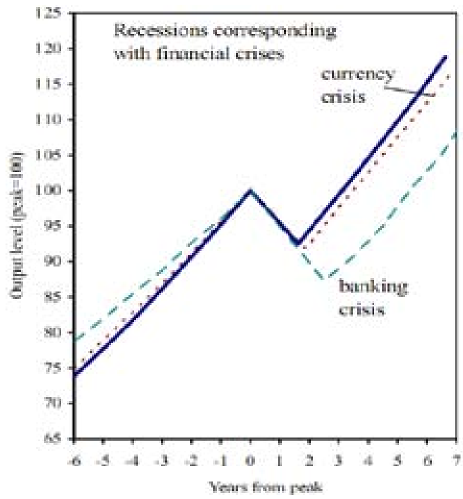
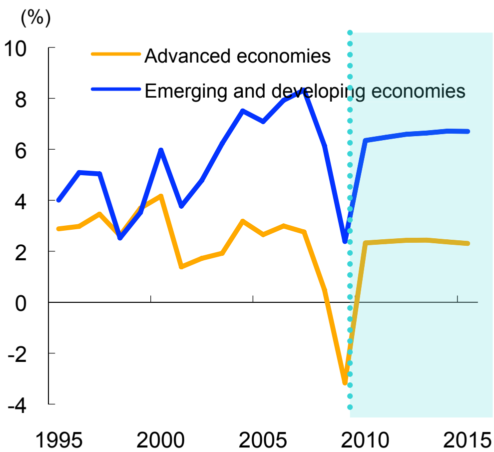


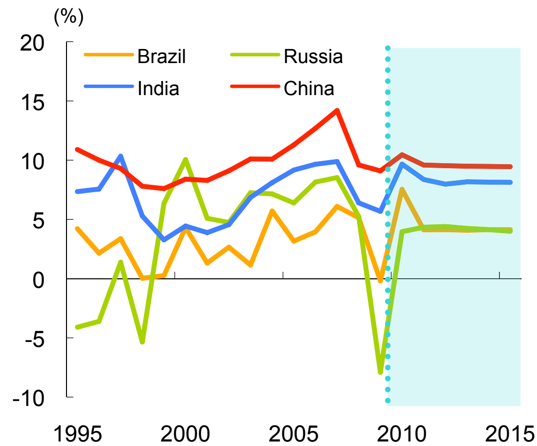
Source: Cerra and Saxena (2007).

their currencies and work to lower market rates. This will make it very hard to conduct economic policy in emerging markets that are heavily dependent on exports and that are sensitive to foreign exchange conditions. If countries freeze or lower policy rates to defend their currencies, plummeting market rates will increase upward pressure on goods' prices and raise the chances of an asset bubble. Conversely, if policy rates are raised to pull market rates upward or relieve pressure on prices, this will attract liquidity inflows and risk accelerating the appreciation of their currencies. As the United States experienced in the early and mid 2000s, large inflows of foreign currency create the conundrum of falling long-term rates, even with policy rate hikes, which can dramatically limit the effectiveness of monetary policy. Care must be taken that the shift in international capital flows after the global crisis does not transfer advanced economies' risks to emerging markets, both by impairing the effectiveness of emerging markets' monetary policies and by making their policy choices more difficult.

More fundamentally, the fact that the dynamics of the global economy could be changing is a variable that must be taken into account. Following the global financial crisis, the G-20 has emerged to replace the G-7 as the leading forum for discussions on the global economy, and emerging markets such as China and India have won greater roles at the IMF and other international financial organizations. According to a 2009 report by the Carnegie Foundation, China will overtake the United States in 2032 as the world's biggest economic power, and by 2050, will have 120% of the United States' productive capacity. Further, the drivers of the global economy will expand from the G-7 countries to the four BRICs countries and Mexico, which are expected to account for 60% of global growth over the next 40 years. As a result, the global economic system will see power move away from American hegemony and gradually towards

Growth Forecasts

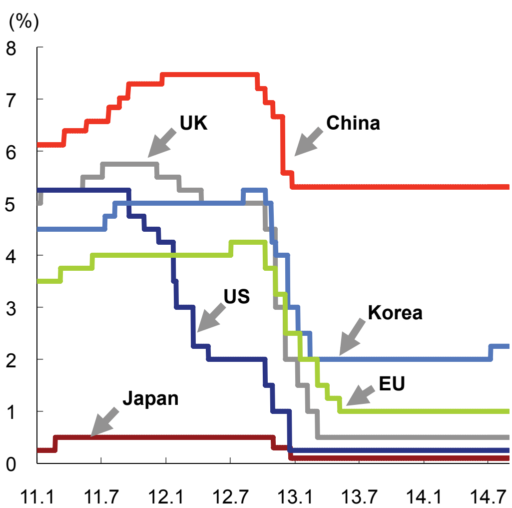


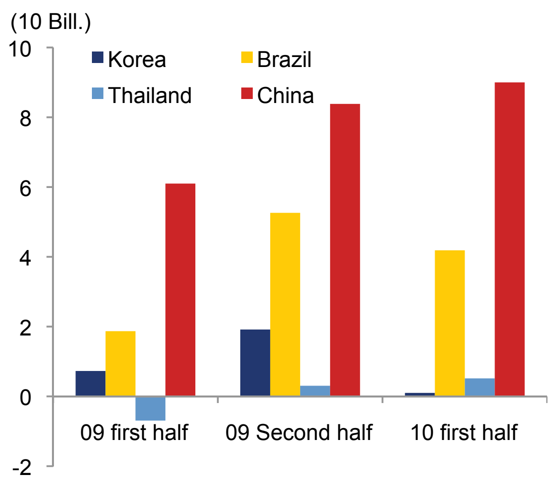


Source: IMF.

Policy Rates by Country

Emerging Market Capital Inflows





Source: Bank of Korea, Bloomberg.

Source: Bank of Korea, Bloomberg.

emerging-market and resource-rich countries, making for more of a multipolar system. With the rise of China, the future structural dynamics of the global economy are also expected to shift to a G-2 system led by the United States and China. Along with this, the possibility cannot be eliminated that, with the United States—the epicenter of the latest crisis—continuing monetary easing policies, confidence in the dollar may weaken and produce a shift in the key currency structure over the long run. In the near-term, the dollar will not lose its status as the key currency, but as SDRs, the euro, and the RMB gradually gain prominence, this could weaken the dollar's position and lead to a system of multiple key currencies.

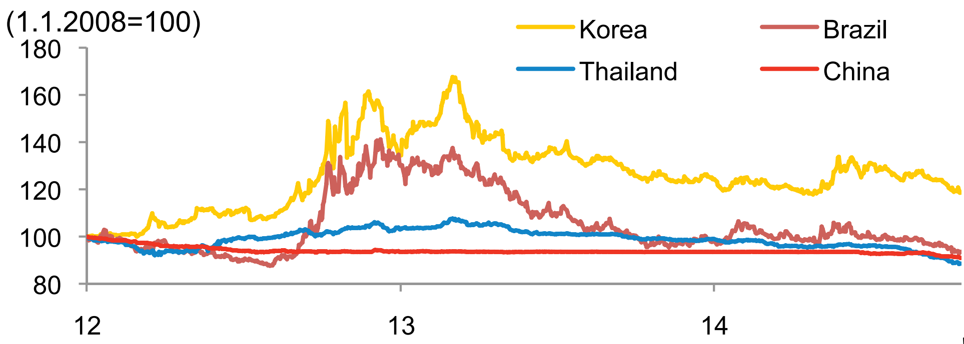
Beyond this, as competition for resources and energy intensifies, Korea and other emerging-market countries must consider the importance of adjusting to a low-carbon, green model as the driver of national economic growth. Resource productivity will be pivotal going forward, and those countries that rapidly take on the low-carbon, environmentally friendly paradigm will emerge as the victors. The IEA is projecting that investment in R&D, supply, and equipment manufacture related to renewable energy technologies will total $299 trillion by 2050. In light of this, the energy market based on new technologies such as hydrogen fuel cells or solar power is highly likely to emerge as a giant industry, surpassing the IT industry.

As such, the domestic and external conditions facing the Korean economy present both reasons for optimism and challenges that will have to be met. Changes in external conditions are quite likely to serve as an opportunity for Korea as it moves from an emerging to an advanced economy. With the recovery of advanced economies from the global financial crisis lagging behind that of emerging economies, global companies are putting off investment and innovation. Korean companies in the process of globalizing in areas such as IT and automobiles can use this as a chance to be able to emerge as global winners by raising their competitiveness through investment and by expanding market share. Further, with Korea now searching for new growth industries, the shift to a low-carbon, environmentally friendly economy should mean creating new markets and new demand. Currently, the Korean economy holds competitiveness in semiconductors, the IT industry, and the like. If these technologies are retooled for the green industry in a way that achieves synergy, Korea will be able to secure global competitiveness in the green industry. Green-industry growth involves switching from the current high-cost, high energy-input structure to a low-cost, low energy-use structure, so we can expect this shift to also boost the efficiency of the domestic market.

Also, the movement of the global economy to a multipolar framework will serve as an opportunity for the Korean economy by allowing Korea to play a bigger role in the international community. Using its economic might to boost its role in international organizations, Korea can move towards a role of policy setter rather than receiver in shaping the global economic order. Furthermore, in the long run, the growth of East Asia, which it appears will become a critical center of the global economy, should also serve as an opportunity for Korea. As economic consolidation accelerates in the region, this can be expected to help shore up Korea's weak domestic demand base, while Korea should be able to obtain greater economic stability through the building of a regional financial safety net and framework for financial cooperation to prevent the spread of global financial crises to regional and domestic financial markets.

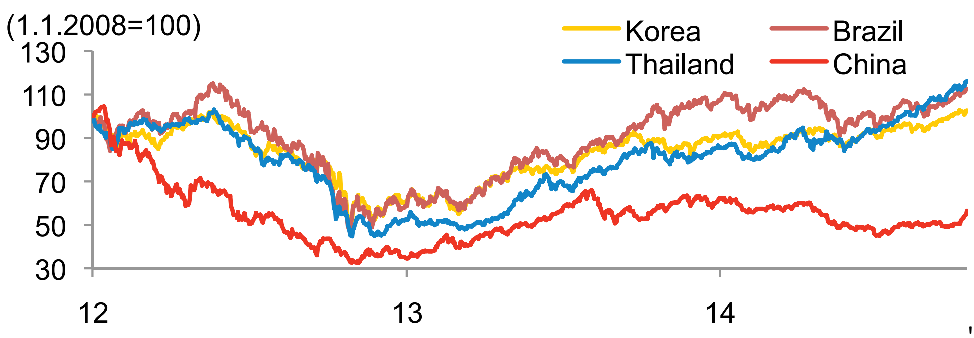
In spite of these positive effects, as Korea becomes more and more dependent on China, this will raise its vulnerability to the external sector. The deepening reliance on China raises the likelihood that instability in the Chinese economy will spread to Korea. China is now maintaining

Emerging Market Exchange Rates vs. U.S. Dollar



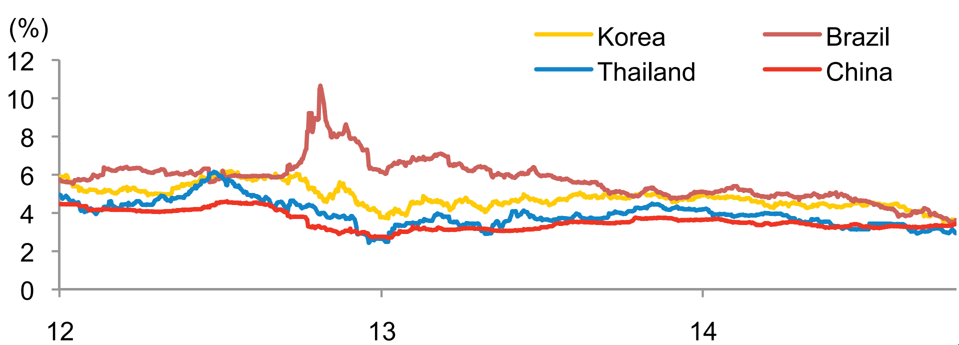
Source: Bank of Korea, Bloomberg.

Stock Prices in Emerging Markets



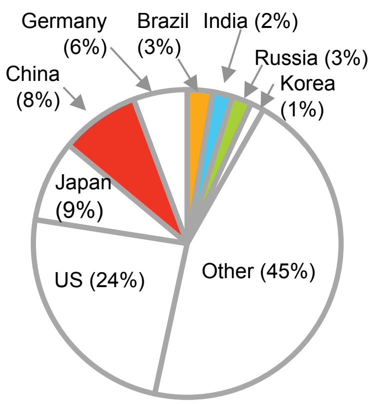
Source: Bank of Korea, Bloomberg.

Long-Term Bond Yields in Emerging Markets

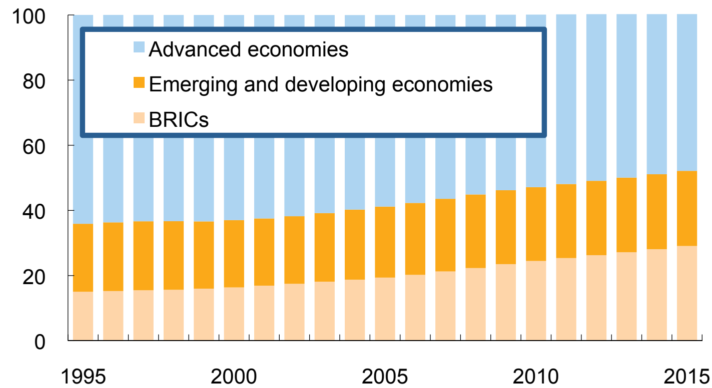


Source: Bank of Korea, Bloomberg.

Global GDP Share by Country



Source: IMF.



Source: IMF.

high growth levels, but its socioeconomic structure presents many uncertainties, so if the potential risk from changes in circumstances comes to bear, the shock will be transferred to Korea as well. In such a case, Korea's real sector could rapidly contract from a plunge in exports to China. As such, Korea must adjust to changes in external conditions to join the ranks of the advanced economies, while also enhancing its ability to absorb external shocks by bolstering its domestic demand base and diversifying its export markets.

As mentioned above, Korea will also have to resolve a lot of domestic tasks in order to achieve sustained, stable growth. First, it will have to address the vulnerabilities in its financial system brought to light during the global financial crisis. It must enhance financial supervisory functions to be able to evaluate and manage financial risks preemptively, while the government, the Bank of Korea, and supervisory bodies will need to build an intimate cooperative framework. Along with this, the Korean financial industry must continue to move forward with globalization. With its heavy external dependence, Korea will find it very hard to escape from having both its domestic financial markets and its real sector affected by changing conditions in international financial markets without the globalization of the financial industry. And as investment in future growth drivers centered on the green industry is increased, the structure of the future Korean economy will have to switch to low-carbon, green growth and focus on developing core technologies related to renewable energy. As stated above, Korea must leverage its technological prowess in the IT and semiconductor industries for use in green technologies to foster linkages between companies and industries and to obtain global competitiveness in such areas as efficient energy technologies.

Korea must also endeavor to escape from its long-held export-led growth policies and move towards balanced growth between export- and domestic-oriented industries. Creating a virtuous circle of enhancing the competitiveness of manufacturing exports and service industries must be done through cultivating service industries that serve as an intermediate role for the manufacturing industry. Developing services not only bolsters the domestic market and helps boost employment, it can also be expected to help relieve pressure on chronic balance-of-payments deficits. Narrowing the divide between large companies and SMEs is also a task that must be taken on. Korea must put in place the foundation for SMEs to be able to grow into large companies by supporting new ventures or SMEs still in their growth/expansion phase and by supporting overseas investment by those SMEs already possessing global competitiveness. Improving the labor market by enhancing its flexibility and establishing sound labor relations is another issue that must be tackled. Moreover, greater labor flexibility will be of help in addressing the youth unemployment problem.

Labor Regulations and Employment Rates of Major Economies

	U.S.	UK	Japan	Germany	France	Korea
IMD Labor Regulations Index	6.3	5.1	5.8	3.1	3.2	2.1
Employment Rate (%)	70.9	72.7	70.7	70.2	64.6	63.8

Source: Statistics Korea, IMD.

Since Korea's growth momentum will be severely impeded in the long run if it does not take steps regarding its low birthrate and aging population, these problems require preemptive responses. Korea's stockpile of human capital will be seriously hampered if low birthrates become entrenched, so it must improve structural problems that span the entire society, such as offering more incentives for having children and tackling discrimination against women in the work culture. An aging population is an unavoidable phenomenon that all advanced economies are going through. It requires parallel development of services such as medical care and nursing, and it also will require a more flexible labor market to facilitate the absorption of all levels of labor.

As can be seen, Korea has a number of tasks it must address in order to sustain stable growth and truly join the ranks of the advanced economies. If such tasks are approached with short-term stopgap measures rather than fundamental solutions, growth may be maintained temporarily on the back of the global economy, but eventually, a low-growth, low-employment structure will become established, and as social polarization worsens, this could easily erode social stability. Further, if Korea sticks resolutely to an export-led model, it will become increasingly vulnerable to external shocks, with external risks spreading to Korea and impeding stable growth. This would mean Korea would not be able to get out of a Nutcracker situation, in which it is unable to truly become an advanced economy, yet is being passed by less-developed markets. This is why it is now an especially critical time to think deeply about how to resolve the tasks now facing the Korean economy.

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The Ongoing Global Crisis and Long-Run Growth Prospects for South Korea

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South Korea is arguably the premier development success story of the last half century. For forty-five years starting in 1963, the economy averaged over 7% growth annually, and experienced only two years of economic contraction: 1980 after the second oil shock and the assassination of President Park Chung-hee, and 1998 at the nadir of the Asian financial crisis. At the start of that period it had a per capita income lower than that of Mozambique or Bolivia; today it is richer than Portugal, a member of the Organization for Economic Co-operation and Development (OECD), and in November 2010, South Korea will be the first Asian and first non-G-7 country to host a summit of the G-20, the unofficial steering committee of the world economy.

While in comparative terms South Korea largely avoided the worst of the recent global financial crisis, it did not escape unscathed. Experiencing a sudden stop in capital flows following the collapse of Lehman Brothers, between its peak in November 2007 and its trough in March 2009, the South Korean *won* plunged 43% against the U.S. dollar. Although the currency is now appreciating, South Korea has been criticized, most notably by Japanese Finance Minister Yoshihiko Noda, for intervening in the foreign exchange market. Analysis by Cline and Williamson (2010) indicates that the *won* is near its fundamental equilibrium value, however, and that the intervention is justified to prevent overvaluation. In part due to this recent history, South Korea is contemplating the introduction of capital controls and has been pushing the idea of international financial "safety nets" in its chairmanship of the G-20.

Global Context

Subramanian (2010) presents a quantitative analysis of the world economy over the period 2010–30 under three scenarios. In the *baseline* scenario economic growth and international trade are generated from a formal model using experts' assessments as inputs. In the *convergence* scenario, the world economy recovers robustly from its current travails, and poorer countries converge on the income levels of rich countries. Obviously, the potential for growth acceleration via convergence processes is greater for poor countries such as China or India than for countries such as South Korea that are closer to the technological and per capita income frontier. A final scenario is called the "lost decade." In this scenario, the rich countries most heavily impacted by the recent financial crisis recover sluggishly, and slow growth in the rich industrial countries acts as a drag on the whole world economy, including South Korea. North Korea remains quiescent in all three scenarios.[1]

1 For the purposes of this paper, contingencies involving North Korea have been set aside to focus on more conventional economic challenges. See Noland (2000) for an analysis of possible scenarios and estimates of the costs and benefits of unification.

At first glance, it appears that South Korea is relatively unaffected by these different assumptions: the growth rate of per capita GDP (measured in purchasing power–adjusted terms ranging from 3.0% in the *lost decade* scenario to 3.5% in the *convergence* scenario). But that difference cumulates to a more than $4,000 difference in per capita income in the terminal year of 2030. Its share of world output remains almost constant at 1.6% in constant dollar terms or 1.1% in purchasing power–adjusted terms across the three scenarios. Perhaps surprisingly, even in the *baseline* scenario, South Korea's trade is projected to rise faster than income, implying an increasing international trade share in GDP, despite its increasing economic maturity.

Korea-Specific Considerations

Given the large role that cross-border exchange plays in the South Korean economy, the general health of the global economy, and specifically the fortunes of China, the United States, Europe, Japan, and India, and other major partners will play an important role in South Korean performance over the medium-run. However, economists normally locate the long-run sources of growth in the availability of the basic inputs to production such as labor and capital, together with productivity growth. In the case of South Korea, during its high growth period it benefited not only from the general openness of the world economy, but also from a rapid expansion of the labor force and a relatively low number of dependents per worker, combined with a significant increase in the educational level of the workforce.[2] Looking forward, however, those favorable demographic factors may go into reverse: South Korea will face a rapidly aging population and a growing legion of nonworking dependents. Under current trends, within the next decade South Korea's dependency ratio will begin rising, and by 2030 population size will begin to decline, falling below its current level by 2040 (Korea National Statistical Office 2006, Japan Center for Economic Research 2007).

Nothing is certain, and changes in underlying behavior could frustrate these projections. Yet if these forecasts prove broadly correct, they imply increases in health and pension burdens that will in turn necessitate adjustments in South Korean policies and practices, such as increasing the retirement age, improving the efficiency of delivery of health care and retirement services, and utilizing female labor, especially educated women, more efficiently. Among the members of the OECD, the club of rich industrial democracies, South Korea has some of the most restrictive immigration policies and may have to reconsider those as well, in response to changing demographics. South Korea's demographic bonus could turn into a demographic onus.[3]

These considerations point to the need to reform the tax system more generally. In the context of likely sluggish growth in some of South Korea's major export markets over the medium-term, the International Monetary Fund in its most recent Article IV consultation recommends removal of tax incentives that favor export-oriented manufacturing over the service sector (International Monetary Fund 2010).[4] The government has begun to address this, albeit by introducing tax incentives for certain specified service industries, rather than moving toward neutrality by removing existing preferences. And looking north, President Lee Myung-bak

2 In an economic, though not political or social, sense the demographic bonus may have been reinforced by wage repression at the point of a gun, which, together with capital channeling, may have boosted investment, at least in traded goods.
3 For more on South Korean demographic issues, see OECD 2008 and Schiff and Syed 2008.
4 See also OECD 2008.

has raised the possibility of a "unification tax" to hedge against the world's largest contingent liability.

South Korean investment has not returned to levels existing prior to the 1997–98 crisis, though in this respect South Korea is not alone: investment in other crisis-affected Asian economies has never fully recovered either. This pattern may reflect over-investment during the 1990s boom, secularly falling profitability as capital is accumulated, and political developments over the past decade. The rise of progressive political forces following the financial crisis, their contentious relationship with the corporate sector, and greater willingness to side with the unions in labor disputes may have contributed to a reduction in business confidence and a consequent attenuation by the business sector to engage in irreversible commitments, which, after all, is what investment represents. Labor market regulations, which make it difficult to fire permanent workers once they are hired, further reinforce caution with respect to expansions of capacity, which may be effectively irreversible in the payroll dimension as well.[5] Direct foreign investment flows into South Korea are relatively sluggish; in a recent UNCTAD survey, South Korea placed 130th out of 141 countries with respect to inward foreign investment performance, and outward investment is rising (UNCTAD 2008). The undeniable impression is that South Korea is losing its luster as a location for production.

Under such circumstances, squeezing the maximum productivity out of labor and capital inputs is essential to maintain growth. South Korea faces important competitive challenges posed by the country's intermediate position between its neighbors, low-wage China and high-technology Japan. Approaching the technological frontier, South Korea faces significant challenges in stimulating productivity growth. It is tempting to think of spurring productivity increases in terms of technological upgrading, and indeed, South Korea's technological progress, particularly in information technology, has been phenomenal. But increasing productivity involves more than just technological change; indeed, technology, narrowly defined, may not even be among the most important drivers. Financial sector reform, for example, could have a considerable impact on the availability of capital to underwrite the commercialization of innovative activity. Changes in labor market regulations could have an equivalent impact with respect to the efficient utilization of labor.

One can conceptualize the process of productivity advance as encouraging innovation in emerging sectors or activities, while at the same time terminating practices that discourage productivity increases in existing activities. Where South Korea falls badly behind is in the heavily regulated service sector, and it is here that the greatest opportunities for productivity increase lie.

In terms of productivity, the South Korean service sector lags the industrial sector, and this divergence is far larger in South Korea than it is in most other OECD countries. In fact, estimates by the IMF and the Hyundai Research Institute indicate that while total factor productivity growth, a concept that measures productivity increase taking the application of both labor and capital into account, has been rising at a rate of 3–4% a year outside the service sector over the last quarter century, productivity in the service sector has actually declined (Schiff 2007, Hyundai Research Institute 2010). According to these calculations, South Koreans are actually getting less output in the service sector, once inputs of labor are taken into account, than they

5 See OECD 2005, 2008 for further details.

were in the 1970s.[6] Whatever the specifics, considerable evidence suggests that South Korea faces a real problem with respect to service sector productivity—and the importance of this problem is growing. China's rise means that manufacturing is likely to play a smaller role in the South Korean economy in the future, a trend that will be reinforced domestically by the growth of South Korea's elderly population, who tend to consume relatively more services than the population as a whole. The service sector could also be a contributor to the balance of payments; it has been estimated that the *Hallyu* phenomenon, the increasing exports of South Korean music, "K-pop," TV programs, films, games, and the like, is contributing $1.5 billion in value-added to the economy and $1 billion in service exports, a figure that could rise dramatically if counterfeiting, especially in China, was eliminated (Choi 2010).

Technological upgrading could increase service sector productivity, but the lack of use of cutting edge technology appears to be less the cause than a symptom of the sector's woes, which are more closely associated with institutional policies and practices that impede competition, particularly by facilitating barriers to entry by new competitors, both foreign and domestic. The time, cost, and number of procedures to create a new firm are above the OECD average. The situation is further complicated by policies that at once impose barriers to entry and then effectively subsidize incumbent SMEs that dominate the service industry (OECD 2008, 2010; IMF 2009). To make matters worse, the stock of foreign inward investment in the service sector is among the lowest observed in industrial countries, as is the share of research and development accounted for by the service sector (OECD 2010). Reforms could include extending deregulatory practices introduced to six Free Economic Zones to the entire country, reforming restructuring practices with regard to failing SMEs, and decriminalizing the personal bankruptcy code to encourage more expeditious restructuring by financially challenged entrepreneurs.

Fortunately, financial sector development could both increase productivity in that important sector and encourage increased aggregate saving and investment, increase the allocative efficiency of investment, improve access to capital to productive SMEs, and, by extension, stimulate the degree of competition in the economy more generally. In the context of the current crisis, the IMF has suggested a number of reforms, including linking support more clearly to restructuring efforts and upgrading bank supervision and regulation (IMF 2009).

What is likely to prove difficult over the longer term is balancing the need to increase the degree of financial integration between South Korean corporations and their foreign counterparts, with the sensitivity of South Korea, located between the large economies of China and Japan, to impede this process to preserve national corporate autonomy. In the future, the development of large sovereign wealth funds is likely to enhance the salience of these concerns, raising the specter of foreign government affiliated entities taking over South Korean firms. South Korea has a history of xenophobia when it comes to foreign investment; one hopes that currently contemplated capital controls undertaken in response to the crisis are not used for, or do not morph into, more general restrictions on foreign investment.

Such developments are particularly unfortunate in the context of the perennial challenges

6 These calculations should be approached with a certain degree of skepticism: the exercise embodies a host of assumptions about the nature of technological change (nicely reviewed in Pack 2001), assumes that factors are paid their marginal products, which is almost surely not the case in South Korea during at least the early part of the sample period, and the econometric literature rejects the constant-returns-to-scale translog production function as an adequate representation of the South Korean economy, or at least its manufacturing sector, over the relevant time period (Kwon 1986, Park and Kwon 1995, Kwack and Lee 2005). The scale of economy specification issue is less of a concern with respect to the service sector, however, and this is where the real problems lie.

posed by South Korea's industrial structure, which is dominated by a small number of large *chaebol*, or family-dominated conglomerates. Foreign corporate competitors and private investors are one potential source of market discipline, which can be imposed on the *chaebol* without resorting to direct regulation, and a potentially positive and constructive force. The foreigners and the emerging good governance movement represented by organizations such as the Center for Good Corporate Governance and the Korea Corporate Governance Fund are natural allies in promoting more fair and transparent practices in the South Korean corporate sector.

Beyond the financial sector, the nature of South Korean labor market regulation has long encouraged segmentation, where there is a small cadre of relatively secure and legally protected employees, who are mainly employed by *chaebol* or public enterprises, and a much larger group of part-timers and workers employed by SMEs, who labor under far less secure conditions. The result is a dualistic system that is rigid in some respects and flexible in others, confers considerable protection to some workers, but few safeguards to others, and encourages confrontational behavior by South Korea's unions. When South Korea was confronted with the specter of mass unemployment during the 1997–98 crisis, it was forced to expand the existing social safety net, yet the provision of social insurance still lags comparators in the OECD. The crisis likewise encouraged reform of some of South Korea's most debilitating labor practices. Looking forward, South Korea could gain from further diminishing the degree of labor market dualism and segmentation, continuing to rein in highly restrictive regulations (with respect to issues such as hiring and firing, for example) that hamper South Korea in international competition, while building legislation protecting the interests of non-regular workers and encouraging the smooth deployment of labor to its most productive uses.[7]

Beyond these generic improvements in the functioning of capital and labor markets, there is scope for more narrow reforms to the innovation system. As South Korea approaches the technological frontier, there are fewer opportunities for imitation and reverse engineering, while at the same time foreign firms are likely to be increasingly reluctant to transfer technology to potential South Korean competitors. The OECD has identified a number of areas of potential improvement (OECD 2005). South Korea's innovative activities are concentrated in a limited number of sectors, and research and development activity in services is low. Considerable scope exists for improving the integration of innovative activities occurring in the universities and other publicsector institutions and the private sector within South Korea, as well as the degree of cross-border integration between researchers in South Korea and those located elsewhere. As in the case of financial and labor market reforms, the government of South Korea is making efforts in this direction, though more remains to be done.

A final challenge confronting South Korea is growing income and wealth inequality. Again, South Korea is not alone in this regard: technological change and globalization have resulted in increased inequality in many countries, and South Korea is far, far from the worst. Yet the rise of inequality has been particularly pronounced in South Korea, and unsurprisingly it is an enormously sensitive issue. As South Korea grapples with inequality going forward, the key issue is to use public policy in a constructive way, by addressing lingering dualism in the labor market, for example. The risk is that inadequate or ineffective public policies in the face of the widening gap could provoke a political reaction that could damage the fundamental drivers of South

7 See OECD 2005, 2008, and Kim 2007 for more detailed discussions of labor market issues.

Korean success. This concern is made more acute by the imperative to maximize productivity growth created by the ongoing medium-term challenges posed by the global financial crisis, South Korea's looming longer-term demographic challenge, and the predicament created by its economic and geographic placement between Japan and China.

Conclusion

South Korea is an open economy, and there is understandable concern about how external conditions could affect the country's economic performance. However, setting aside possible contingencies involving North Korea, the primary conventional economic challenge facing South Korea is located not so much in its external relations, but rather in a nexus of interrelated problems revolving around the country's demographics, long-term fiscal position, and lagging productivity in the services sector.

These are daunting challenges. Yet two generations ago few would have predicted South Korea's stunning rise. One can only hope that the strengths that the country has exhibited in achieving its extraordinary past accomplishments will be equally evident as it addresses its future challenges.

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Implications for the Future of the Korean Economy

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Recent Global Financial Crisis and the Korean Economy

The recent global financial crisis pushed the world economy into the most severe turmoil since the Great Depression of the 1930s. During the five years prior to the crisis, the world economy enjoyed the so-called goldilocks condition of "not too hot and not too cold," with the average annual growth rate of almost 5% and the inflation rate of only 2%. However, the crisis caused the world economic growth rate to tumble to 2.8% in 2008 and -0.6% in 2009. Total global losses from the financial crisis are estimated at $40 trillion, equivalent to more than two-thirds of the 2009 world GDP, including the loss of $35 trillion in publicly traded corporate equities and $5 trillion in home equity and unincorporated or privately listed businesses (Greenspan 2009). In terms of foregone output, the net present value cost of the crisis is estimated at anywhere between one and five times the annual world GDP (Haldane 2010). According to the IMF (2009), global credit losses by investors are estimated at $4 trillion, three-quarters of which were borne by banks and the rest by non-bank investors.

The Korean economy is highly vulnerable to external shocks, and it also suffered greatly in the aftermath of the crisis. The growth rate of the Korean economy declined from 5.2% in 2006 and 5.1% in 2007 to only 2.3% in 2008 and 0.2% in 2009. The exchange rate of the Korean *won* depreciated from 1,050 *won* per U.S. dollar in August 2008 to 1,570 *won* per dollar in March 2009, implying a *won* depreciation of 36%. The KOSPI composite stock index fell from over 2,000 just before the crisis in the autumn of 2008 to below 900 in October 2009. Reflecting the global decline in the trade volume during the financial crisis, Korean exports in the first quarter of 2009 were 25% lower than in the same quarter of 2008.

The Korean economy is especially vulnerable to external shocks due to its openness. The foreign trade volume is equivalent to 85% of Korea's GDP, almost double the world average of 43% and much higher than that of Japan (30%) and China (50%). As the global economy suffered from the financial crisis, first the Korean exports were immediately affected and then the export-dependent economy suffered subsequently. Furthermore, the Korean financial markets have been completely open since the Asian financial crisis of 1997–98, exposing them to the international hot money flows. Along with other countries, such as Australia and New Zealand, Korea has become a target of international currency carry traders exploiting its relatively large and free financial markets.

For these reasons, Korea's economic prospects are also closely linked with the prospect of global economic recovery from the recent financial crisis. The speed of the Korean recovery depends on how well the world community deals with the root causes of the crisis. But there has been some confusion and misunderstanding about the true origins of the crisis.

Real Causes of the Recent Financial Crisis

Several macroeconomic missteps have been blamed for causing the recent global financial crisis. For example, some have argued that the global imbalance has been magnified by prolonged low savings and high consumption in the United States, causing the accumulation of massive foreign exchange reserves in East Asian countries and others. These surpluses were promptly recycled back to the United States prior to the crisis, resulting in the excessive liquidity and low investment returns that, in turn, encouraged risky investment behaviors among Wall Street bankers. The U.S. Federal Reserve under Chairman Alan Greenspan has also been blamed for contributing to a prolonged period of excessive liquidity because of its liberal monetary policy in the wake of the 2000–01 tech-stock collapse and the subsequent 9/11 disaster. Also, the root cause of the U.S. subprime mortgage crisis has been traced by some to the over-enthusiastic drive by both Democrats and Republicans in Congress to promote home ownership, even among low-income households, by forcing American banks to make mortgage loans to poorer neighborhoods by enacting such laws as the Community Reinvestment Act. Others have also blamed excessive Wall Street greed for the crisis, ignoring the fact that free-market capitalism has always operated on the basis of profit motives. Greed in Wall Street or even in Main Street has been there all along, but it has not always triggered financial crises.

While the above factors may have played a supporting role in the recent global financial crisis, they were certainly not the primary causes of the crisis. The root cause of the international financial crisis was the abuse of various complex financial techniques and new investment instruments that have been developed in recent decades. The world financial markets have experienced a sharp acceleration in the pace of financial innovations over the years. Major innovations have emerged in the fields of new financial products, funding and investment tools, and trading and risk-management techniques. Both the richness and the complexity of these new financial products and techniques bear testimony to the robust spirit of financial innovation that has pervaded international financial markets since the 1960s. While these innovations have improved market efficiency in general, some of them have been misused and abused by a certain group of market participants out of ignorance and/or outright greed.

The modern history of international finance has really been driven by a series of innovations. Global financial markets have thrived on the wings of the animal spirit of innovations. Financial innovation involves more than development and diversification of new borrowing sources. It affects the entire range of financial intermediation, both domestic and international. In fact, the variety of services offered by financial intermediaries has not only been on the asset side, but has been equally impressive on the liability side of balance sheets. Liability management of modern financial institutions has become an important part of their integrated approach to financial intermediation (Buljevich and Park 1999).

In recent decades, the pace of financial innovations has accelerated precipitously, which, in turn, has driven the explosive growth in both the size of global financial markets and its array of new financial products and techniques. As of mid-2008, the outstanding volume of worldwide debt securities (cash market instruments) stood at $87 trillion, or 150% of world GDP then. On the other hand, the total outstanding volume of derivatives such as swaps, futures, options, and forwards (in terms of their notional principal amounts) amounted to about $700 trillion, and the daily volume of foreign exchange trades stood at $4 trillion. The value of foreign exchange trading has risen sharply relative also to the global trade volume, from 11 times global trade in

1980 to 73 times today. Such a gigantic global financial market, far higher in magnitude than the real sector of the global economy with the world GDP of $58 trillion in 2009, is run by hordes of global financial institutions, many of which operate around the clock across the entire 24-hour time zones. The old adage, of "the sun never sets on the British Empire" is now replaced by a new reality of "the sun never sets on the Citibank or Credit Suisse or Goldman Sachs, etc."[1] In the United States as in other developed countries, the financial sector's gross value-added (GVA: the value of gross output that a sector produces less the value of intermediate consumption) has quadrupled from about 2% of GDP in the 1950s to about 8% today (Haldane, Brennan, and Madouros 2010). There has thus been an increasing "financialization" of the economy.

Within the financial sector itself, there has been a fundamental change in its main business model. Financial market securities leapfrogged in volume over traditional bank credits. In the United States, securitized debt grew nearly 50-fold from 1980 to 2000, compared to a mere 3.7-fold increase for bank loans. Financial institutions have invented a dizzying array of all sorts of tradable securities, including a host of complex, opaque synthetic securities. The power of Wall Street was also shifted in the process from the traditional investment bankers relying on fee incomes to a new breed of traders betting an ever-growing amount of their bank's own funds as well as clients' funds in the trading pits. Wall Street's new "masters of the universe" are no longer the legendary deal makers but fearless trade warriors betting tens of billions of dollars and raking in tens and hundreds of millions of dollars in profits. In the brave new world of finance dominated by trading, and especially proprietary trading with bets using banks' own funds, the concept of long-term clients has degenerated into mere "counterparties." Modern-day financial legends such as George Soros and many hedge-funds captains all made their billions from the trading side of finance, not in corporate finance or traditional investment banking. This tectonic shift in the finance industry is showcased by Goldman Sachs, whose assets have skyrocketed from mere $100 billion in 1995 to $1.1 trillion in 2007 while raking in billions of dollars in trading profits. Its top management ranks are almost exclusively from the trading floors instead of the investment banking business. This shift is symbolized by the new 43-story headquarters building of Goldman Sachs, which has no less than six massive trading rooms, each larger than a football field.

Thus, a careful observer has to conclude that the recent financial crisis was primarily the direct result of the abuse of some of the complex and opaque trading instruments, most of which were too esoteric and technical to be comprehended correctly by either government regulators or academic economists. Many crises are often a byproduct of the cycle of financial innovations. First, new sophisticated financial products or techniques are developed and utilized exclusively among the few early innovators, to their great advantage. At the second stage, as the innovation is copied and spreads to a wider circle of market participants, some of the participants start to abuse them, out of either ignorance or outright greed. At this stage, regulatory authorities have not caught up with the full implications of the new innovation, and there appears a regulatory vacuum as far as the new innovative product or technique is concerned, which tends to embolden the early abusers to push the envelope to an extreme limit. At the next stage, such abusive practices are further copied and imitated by a wider circle of market participants, resulting in a full-blown crisis. At the final stage, both government authorities and general market practitioners start to take corrective actions, including introduction of new regulations and new supervisory tools. By this time, however, the damage has already been done to a significant sector of the economy.

1 In fact, the advertising slogan of Citibank, "Citi never sleeps!" is quite an accurate description of today's global financial institutions.

Financial innovations have not only generally increased the size and complexity of global financial markets but have also contributed to new ways to enhance income for market participants. As a result, the financial sector has experienced explosive growth in recent decades. U.S. financial assets exploded in size from around 400% of GDP in 1960 to 950% of GDP by 2007. There has been an especially sharp increase in securitized debt, which rose 50 times between 1980 and 2000. The share of the profits of the U.S. financial industry rose from 10% of the total corporate profits in the early 1980s to over 40% by 2007, even after Wall Street had paid out salaries and bonuses amounting to 60% of net revenues (Woolley 2010). Along with the rapid expansion of the financial services industry, there was a radical transformation of the U.S. financial system during the past six decades. The 1933 Glass-Steagall Act separated commercial banks from investment banks in the United States. Therefore, commercial banks relied mostly on deposits to fund their loans and investments to generate income, while investment banks depended on stock brokerage commissions as their main source of revenue. However, the so-called May Day financial deregulation in 1975 removed fixed stock brokerage commission rates, pushing investment banks in Wall Street to look for alternative revenue sources. Consequently, investment banks started to leverage their capital up to 30 or more times to engage in proprietary trading and private equity investments. They also developed and traded esoteric financial products, known as structured financial instruments such as CDOs (collateralized debt obligations) and CDS (credit default swaps), for a high risk–high return strategy. This strategy had worked fine until 2006, when the total bonuses at Wall Street firms amounted to $62 billion!

Esoteric Structured Financial Products and the Financial Crisis

The seed of the recent crisis was planted several decades ago in the financial industry's attempts to create new lucrative trading instruments when the Government National Mortgage Association (GNMA, known as Ginnie Mae) pioneered securitization of mortgage loans in 1970, by bundling hundreds and thousands of long-term mortgage loans into marketable bonds known as mortgage-backed securities, or MBS. MBSs are so-called pass-through securities, which are new types of bonds whose investors retain ownership interest in the collateralized assets, which in this case are home mortgage loans. The emergence of the MBS market injected new liquidity into the entire mortgage loan industry, as many mortgage lenders were able to sell their long-term mortgage loans to Ginnie Mae and other Wall Street firms that specialize in pooling and securitizing these mortgage loans. In the process, the original mortgage loan lenders could then make more new mortgage loans with the fresh cash that they obtained by selling the earlier mortgage loans to Ginnie Mae and Wall Street bundlers.

Mortgage loan securitization was given an added impetus when, in 1983, the Federal National Mortgage Association (FNMA, known as Fannie Mae) came up with the first collateralized mortgage obligations (CMOs). Unlike MBS, CMOs are so-called pay-through securities, where the investors of these securities do not have any ownership interest in the mortgage loan collaterals, but their new securities (CMOs) are serviced by the cash flows generated by the collateral assets. In other words, while pass-through securities such as MBS are certificates of ownership in the collateralized assets such as mortgage loans, pay-through securities such as CMOs are simply collateralized debt obligations whose debt service is provided by the cash flows generated by the collateral pool. The added advantage of new securities such as MBS and CMOs lies in the fact that they can be issued in different tranches categorized by the degrees of risk exposure, with the safest tranche usually accorded the highest credit rating of triple-A; the lowest tranche, known as the "toxic materials," is normally unrated due to its high credit risk, but carries very high yields.

Securitization soon spread from home mortgage loans to other financial assets such as commercial mortgage loans, auto loans, credit card receivables, equipment leases, home equity loans, manufacturing loans, student loans, and others. By early 2007, 53% of all non-financial debt in the United States was securitized, compared to only 28% in 1980. By the end of 2006, the outstanding volume of securitized instruments in the United States alone reached over $9 trillion, composed of $7 trillion in MBS and CMOs and $2.1 trillion in other asset-backed securities (ABS). The widespread practice of securitization has enriched the financial markets all over the world, allowing a number of homeowners and other market participants a greater access to lower-cost credit that would otherwise have been unavailable. Securitization provides a "secondary" market for traditional illiquid bank loans and other financial assets, thereby pushing down borrowing costs for consumers and companies alike. There have been other systemic gains as well. Subjecting bank loans and other debt to valuation by capital markets encourages the efficient use of capital, and the broad distribution of credit risk through securitization reduces the risk of only a few creditors shouldering all the credit risk.

While securitization all over the world has in general made a positive contribution to global financial markets, it has also implanted a seed of abuse and misuse. The popularity of MBS and CMOs has provided major market players such as Wall Street firms and credit rating agencies a great opportunity to increase fee income by bundling all kinds of debt instruments into various tranches of securities, some of whose upper tranches can carry prime credit ratings to satisfy the investment requirements of many institutional investors such as pension funds and insurance companies, while the lower-rated tranches carrying higher yields prove attractive to such risk takers as hedge funds and other specialized investors.

Securitization has become a major source of fee income for those institutions connected to its business, such as loan originators (mortgage lenders and mortgage brokers), Wall Street firms acting as underwriters and placement agents for newly created securities, large commercial banks and insurance companies acting as credit enhancers for the securitized instruments, credit rating agencies with more ratings business, and investors eager to pick up additional yields by obtaining exotic new securities. In order to satisfy the growing demand by Wall Street for new mortgage loans that have become the most crucial raw materials (i.e., collaterals) for the securitization process, originators of mortgage loans became bolder and more risk-taking by expanding into even subprime mortgage loans. The subprime mortgage market in the United States barely existed 10 years ago, but it exploded in recent years prior to the financial crisis, with a total outstanding volume of $2.5 trillion in subprime mortgage loans.

Mortgage loans have been the traditional raw materials (i.e., collaterals) for MBS and CMOs, but the securitization industry, ever hungry for more business, launched in late 1990s the CDOs, whose collaterals are not just new mortgage loans but also already-existing MBS, CMOs, and ABS backed by mobile home loans, car loans, airplane leases, and credit card receivables, as well as other CDOs and even derivatives linked to these mortgage securities, known as credit default swaps or CDS. The main advantage of such CDOs over conventional MBS or CMOs is that they do not need a supply of new mortgage loans, since their raw materials (collaterals) need not be confined to new mortgage loans as in the case of MBS and CMOs. Thus, Wall Street was able to create a brand new category of securities in the form of CDOs utilizing as collaterals existing securitized instruments or even derivatives linked to them, while in the process making huge sums of additional fee income.

Whereas the first-generation CDOs utilized as collaterals such assets as mortgage loans, MBS, CMOs, and ABS, the next development was the creation of the notorious "CDO squared" and the occasional "CDO cubed," which repackaged the hard-to-sell mezzanine CDO tranches as collaterals to create more AAA-rated CDO bonds. Finally, the latest, third-generation CDOs, known as "synthetic CDOs," were created by Wall Street, significantly altering the evolution of the CDO market, opening the door to rampant market abuses, and resulting in the eventual collapse of the huge securitization market, triggering the global financial crisis. Rather than relying upon cash assets, such as bonds and loans as collaterals, synthetic CDOs are created from pools of CDS, which are derivatives similar to insurance contracts protecting against certain credit risks. The use of CDS as collateral pools in CDOs could give the same payoff profile as cash assets but did not require the upfront cash funding for buying the traditional collateral asset pools. Furthermore, using CDS as opposed to cash bonds gave CDO managers in Wall Street the freedom to securitize any cash flows without the need to locate, purchase, or own the specific collateral asset pools prior to CDO issuance. With the development of synthetic CDOs, the CDS market became even more valuable to Wall Street, and the volume of both CDS and CDOs experienced an exponential growth.

In their heydays, CDOs were the investment of choice for numerous asset managers and investors, since they carried both sterling credit ratings and excellent yields, much higher than comparably rated corporate bonds.[2] During the post-9/11 period, of the relatively low interest rate and excess liquidity, there appeared among investors intense competition globally for extra yield. CDOs were the perfect investments of choice among asset managers hungry for higher yields to stay competitive. They were eagerly bought by major investors around the world, such as pension funds, mutual funds, hedge funds, and commercial and investment banks, including some of the largest and most sophisticated financial institutions. However, when the real estate bubble finally burst and the subprime mortgages started to default, there was massive downgrading of CDOs and other structured financial products, which led to huge write-offs by financial institutions around the world, thus triggering the financial crisis. The adverse impact of the global financial crisis soon spread to Main Street, pushing the global economy into the Great Recession. The world economy is still suffering from its after-effects.

Resilience of the Korean Economy and Its Recovery

The abuse of some of the most sophisticated financial practices eventually led in September 2008 to the collapse of Lehman Brothers, the fourth-largest investment bank in Wall Street at that time, with over $700 billion in total assets and $740 billion in outstanding derivatives contracts with more than 5,000 counterparties around the world. As the global financial crisis spread to Main Street, it triggered the collapse of global trade. Korean exports in the first quarter of 2009 were 25% lower than in the same quarter of 2008, and the trade-dependent Korean economy contracted by 5.1% in the fourth quarter of 2008. As global deleveraging intensified in the aftermath of the crisis, the comparatively liquid Korean financial markets allowed speculative

2 The reason for this is too complicated to be explained properly here. For a detailed explanation of the reason, see Park 2009.

and other foreign investors to unwind their investments more easily than in other less liquid market countries. Capital outflows from Korea amounted to 5.5% of Korea's GDP during this crisis, which was higher than at the time of the Asian financial crisis of 1997–98, resulting in a sharp depreciation of the Korean *won* and the collapse of the Korean stock market. The Korean foreign exchange reserves also fell from over $260 billion to about $200 billion during the crisis. To counteract these capital outflows, the Korean government entered into currency swap agreements with the United States ($30 billion), China ($30 billion equivalent in *yuan*), and Japan ($20 billion equivalent in *yen*). Consequently, the Korean risk premium subsided, with the Korean CDS premium declining from almost 700 basis points at the peak to the pre-crisis level of about 100 basis points.

The Korean government also embarked upon an unprecedented level of fiscal stimulus efforts equivalent to 3.7% of GDP in both government spending and tax cuts, and the Bank of Korea reduced the policy rate from 5.25% in October 2008 to the all-time low of 2% by February 2009. Fortunately, the bitter experience of the earlier Asian financial crisis has taught both Korean banks and corporations to be conservative in their financial management. The Korean banking system maintained healthy balance sheets at the time of the crisis, with an 11% risk-weighted capital ratio as compared to the 8% minimum mandated by the Basel Committee on Banking Supervision. Unlike the Asian financial crisis of 1997, when Korean companies carried an average debt/equity ratio of over 400%, their balance sheet in 2007 showed an average debt/equity ratio of just over 100%.

The Korean economy has since rebounded impressively from the world's Great Recession in the second half of 2009. In the fourth quarter of 2008, the Korean economy declined by a quarter-to-quarter (q/q) seasonally adjusted annual rate (SAAR) of 16.8%, but the subsequent recovery has solidified, with economic growth averaging 7.4% of q/q SAAR in the first half of 2010 in what has so far been a classic V-shaped recovery. The Bank of Korea projects the Korean economy to grow by 5.9% in 2010, while the IMF's latest projection (IMF 2010b) indicates a growth rate of 6.1%. Such an impressive recovery is fueled to a large extent by the quick rebound in Korean exports, which are likely to increase by 23% this year compared to a decline of 14% in 2009. Last year, Korea also became the ninth-largest exporter country in the world. The performance of large Korean *chaebol* firms has been especially impressive. For example, the total operating profit of Samsung Electronics Company last year was about $8.5 billion, which was larger than the combined profits of the nine largest Japanese electronics firms, such as Sony and Toshiba.

Diversification of the Korean exports markets has also contributed to the resiliency of the Korean recovery. From the undue reliance in the past on the United States for exports, Korean firms have diversified their export markets in recent years. Now, the fast-growing China is the largest export market for Korea, accounting for 24% of the total Korean exports in 2009, followed by 13% for the European Union. The North American market, including the United States, now accounts for only 11% of the total Korean exports, the same share as that of 10 ASEAN countries, and Japan's share is only 6%. The fact that developing countries now account for over 70% of total Korean exports has been especially positive for the Korean economic recovery, as some of the major developing countries, such as China and the ASEAN countries, have experienced the fastest economic growth rates since 2009, with China's GDP growing at 9.1% last year.

Barriers to Korea's Economic Growth Potential

Korea's economic performance in the aftermath of the global financial crisis has been impressive, exhibiting a solid V-shaped recovery. However, the long-term trend of the Korean economy is not as bright as it used to be. The Korean economic growth rates have materially slowed down over the past two decades, from the annual average growth rate of 6.2% in the 1990s to 4.3% in the 2000s. A recent study by the Korea Chamber of Commerce and Industry projects a steady decline in Korea's economic growth potential from the current 4% to only 2–3% in the coming decade. Korea's population trend is also not encouraging. The Korean birth rate has steadily declined to one of the lowest among the OECD countries, with a fertility rate (children per adult woman) of only 1.2 in 2009 from 1.6 in 1990, which is well below the replacement rate of about 2.0. At the same time, the population has been aging rapidly. Those who are 65 years or older account for 11% of the total population this year, and they are projected to increase to 38% of the population in 2050.

One of the main weaknesses of the Korean economy is the fact that, like Japan, which has still not recovered from almost two "lost decades" since the early 1990s, Korea has essentially a dual economy: the internationally competitive export sector on the one hand and the heavily regulated and inefficient nontradables sector, especially the services industry, on the other. The Korean services sector accounts for only 67% of the economy, which is twenty-ninth among 30 OECD countries, and the Korean service sector is also concentrated in low value-added industries, according to a 2009 study by the McKinsey consulting firm. The service sectors of even East European countries account for a higher portion of their economies than in Korea. In most advanced Western European and North American countries, the service sector accounts for about 80% of their GDP, from 85% in the United Kingdom and 84% in the United States to 75% in Germany. The share of employment in the service sector is only 65% in Korea, compared to over 80% in the United States and other advanced countries. The productivity of the Korean service sector is also very low due to excessive regulations and the low operating scale of most service firms, according to the McKinsey study. Despite solid performance in the merchandise trade, Korea chronically has suffered huge trade deficits in services since the 1990s.

One classic example of such a poor state of the services sector is the medical services industry, where the high quality of Korean medical personnel such as doctors and nurses is generally well recognized internationally. Despite repeated attempts over the past five years, including direct interventions by the Blue House, to introduce for-profit hospitals that can attract many affluent foreign medical tourists from the increasingly affluent middle and upper classes in China and other Asian countries, the government has still not been successful due to the entrenched opposition by various interest groups. Corruption in Korea is also still high, especially at the lower reaches of the government, where the population has to interact with various government officials due to a host of petty regulations. According to the 2010 Corruption Perceptions Index (CPI) published by Transparency International, Korea ranks thirty-ninth out of 178 countries surveyed. In the report, Korea is ranked way below such countries as Uruguay, Dominican Republic, and Slovenia, and it ranks even below the African nation of Botswana. Early this year, a Korean college lecturer committed suicide, leaving behind a bitter letter in which he described how he had been approached by some colleges to pay $150,000 to $300,000 to be promoted from a simple low-pay lecturer status to a regular faculty member. Having lived for over 40 years in the United States and having spent his entire teaching career at American universities alone, this author has no direct personal knowledge about the truth of such ugly and shameful rumors, but similar stories have been heard on some occasions.

Then, in a *Chosun Ilbo* column on December 22, 2009, Sang-hoon Yang, a highly reputable Korean journalist, reported the case of one of his close personal friends. This small businessman friend wanted to expand his factory, and he even received the personal blessings from the governor of the province where the factory was to be expanded and thus more people to be employed. But he was repeatedly rebuffed by lower-level officials who openly demanded bribes amounting to several hundred thousands of dollars. After 11 months of fruitless attempts to obtain the construction permits in the honorable way, this businessman finally gave up and sold off even his existing factory. Then, he asked his son not to serve in the Korean army and instead to go abroad to study and to get an immigrant visa there.

The volume of foreign direct investments (FDI) in Korea has also steadily decreased in recent years. Last year, the net FDI in Korea declined by almost 60% compared to the previous year, with the FDI amount now falling back to the level achieved almost 15 years ago. In fact, many large Korean multinational firms such as Hyundai Motors and Samsung Electronics have aggressively expanded their direct investments abroad for strategic reasons, such as better market access and lower labor costs. At the same time, many small and medium-sized enterprises (SMEs) have also relocated their factories in low-cost countries such as Vietnam, Indonesia, Cambodia, and the Philippines. Despite the generally high youth unemployment rate in Korea, the young working-age Koreans are reluctant to get jobs at SMEs, where mostly manual laborers are needed. In desperation, these SMEs are forced to hire immigrant workers, some of whom are without proper work permits in Korea.

The true number of the unemployed in Korea may be much higher than the official statistics indicate. Government data, as reported in the *Joong-ang Ilbo* on January 18, 2010, suggest that the total number of unemployed in Korea stood at less than 900,000 last year, but the true figure is claimed to be more than four times higher at four million, if one includes also those working less than 18 hours per week, temporary workers, the discouraged workers not looking for jobs anymore, those studying and preparing for targeted professions later, and so on. Almost half of recent college graduates are effectively unemployed, according to labor experts.

Despite superficial impressions held by some foreigners, including President Barack Obama, regarding the efficiency of the Korean education system, the reality is quite different. It is well recognized by Koreans themselves that the Korean education system focuses too much on passing tests rather than nurturing creative and independent thinking. Many concerned Koreans consider it not an accident that no Korean so far has won a Nobel Prize in the science field, while Japan has 16 such winners already. Large Korean multinational firms have responded to this challenge of the dysfunctional education system in Korea by aggressively recruiting international staff, including overseas Koreans. Currently, 45% of the workforce at Samsung Electronics Company is international staff, and the company plans to raise it to 65% by 2020. The official education system for primary and secondary school children is especially dysfunctional, forcing most students to supplement their regular schooling by private, after-hours private tutoring. The cost of this extra after-hour schooling is estimated to have increased from 1.5% of the average household income in 1985 to 7.8% in 2007. It is a common sight at the Korean airports to spot school-age children, some as young as primary school age, who are leaving home and going abroad to study in foreign, preferably English-speaking, countries, to attend schools there. Even in the Washington suburbs, one can easily come across these young Koreans attending schools here alone or chaperoned by their mothers, leaving their fathers in Korea to earn the money to support their children's education overseas.

Foreign observers, especially those at multilateral financial institutions such as IMF, World Bank, and Asian Development Bank, tend to paint a generally optimistic picture of the Korean economic prospect. It may be partly political, since these multilateral institutions need some successful examples as the fruits of their six decades of development aid around the world. This could be part of their efforts to showcase their good work in the face of the growing "foreign aid fatigue" among both the general population and policy makers of donor countries. Korea can be genuinely pointed out as one country that has successfully graduated from the aid recipient status to become a donor nation.

However, the relative position of the Korean economy in the world has steadily declined from the eleventh-largest economy of the world in 2003 to the fifteenth now. According to the 2010 Nation Brands Index (NBI) compiled by Anholt-GfK Roper, Korea ranks only thirty-third out of 50 countries studied.

Medium-Term Prospect

The latest projection by the IMF (2010a) indicates that the Korean economy is to grow at around 4% annually during the next five years, with the per capita GDP reaching $28,486 in 2015 from $17,071 in 2009. According to a study of past major global financial crises, the adverse impact on the economic growth rate tends to last about ten years after a major crisis, with a median post-crisis GDP growth decline of about 1% in advanced countries compared to the pre-crisis ten years. The post-crisis unemployment rate also tends to be about 5% higher than in the pre-crisis decade (Reinhart and Reinhart 2010). As an open economy, Korea's economic prospects are closely tied to those of the world economy. As the global economic growth rate is likely to slow down in the coming decade compared to the pre-crisis decade, the Korean economy is confronted by a challenging prospect indeed.

Certainly, Korea has come a long way from 1960, when the per capita GDP was around $100, which was much lower than that of many South Asian and even some African countries at that time. Thus, one should not minimize such a monumental achievement of the Korean people. How has this amazing achievement been possible? Without doubt, it took lots of sweat, tears, and, yes, even blood shed during the brutal Korean War of 1950–53. Two fundamental questions at this point, though, are: does this success prove that Koreans are smarter than others? And are Koreans genetically predestined to belong to an advanced industrialized country in the twenty-first century? The answers to these two questions are obvious or even self-evident: Koreans are no smarter than any other race on the globe, and so Korea is not predestined to become an advanced industrialized country. Korea's past success is simply a case example of historian Arnold Toynbee's "challenge and response" theory. According to Toynbee, the great ancient civilizations of China, Egypt, and others did not rise in the fertile and temperate paradise lands. To the contrary, their habitats were in general severely challenging to the settlers, with periodic floods as in the Nile Delta region, harsh winter weather as in the Yellow River basin of China, or other adversities. Those early European immigrants who had settled on the warm and fertile Carolina coasts of the United States disappeared without leaving a trace, while those who had settled in New England fighting harsh winter weather were able to flourish eventually.

Koreans faced a brutal survival challenge of both the Korean War and the subsequent abject poverty in the 1950s and 1960s. Koreans understood at that time that unless their economy became strong and self-sustaining, they could be easily swallowed up any time by communist North Korea. This survival challenge triggered on the part of the Koreans a fierce response of nation building and industrialization through sweat and tears. The same is true for the other Asian tiger economies of Taiwan, Hong Kong and Singapore. Taiwan and Hong Kong were peopled by the hardy refugees from communist China, and they could also be annihilated by Chinese communists at any moment unless they became both economically and militarily strong and self-sufficient. In a similar fashion, Singapore was originally a poor fishing village peopled by wretchedly poor and uneducated Chinese coolie refugees from southern China. This small city-state with no natural resources and not even their own drinking water source became independent in 1965 from the Muslim Malaysia in the north, and was threatened by the largest Muslim country in the world, Indonesia, in the south. Their only chance to survive as a nation and as a people was to develop their economy into a strong and independent nation. The success of these four Asian tiger economies does not prove that they were the countries of supermen, but rather that they were twentieth-century examples of Toynbee's "challenge and response" theory.

The greatest challenge to the Korean economy now is whether the Koreans can maintain those frontier spirits born during the early era of sweat and blood. Another challenge for Korea is how to transition the country successfully from a government-led economy to a truly market-led one. Right now, the government is too strong and too intrusive in Korea, often stifling the entrepreneurship and creativity of businessmen. Companies are struggling under mountains of regulations, and the government tries to micromanage the economy. The public sector in Korea is still too pervasive, but it is very difficult to privatize state-owned enterprises (SOEs) due to the fierce resistance by militant labor unions and other entrenched interest groups. The current Lee Myung-bak administration initiated an energetic drive in 2008 to privatize 40 of the nation's 400 SOEs. So far, though, not a single SOE has been privatized during the Lee Myung-bak administration despite repeated efforts by the Blue House.

The precondition for a truly modern and industrialized Korea must be to reduce the power of the Korean mandarins, who are generally smarter and better educated than most businessmen. These Korean mandarins have on their side the history of successful management of the Korean economy over the past five decades. Major milestones on the path toward the recent Korean industrialization were both planned and initiated by the mandarins. The Seoul-Busan Expressway, the Pohang Iron and Steel Corporation, prosperous shipyards in Gojae Island, the Masan-Changwon heavy industries center, the Gumi electronics complex, and even Hyundai automobile plants in Ulsan: these and other symbols of successful Korean industrialization during the past several decades make it extremely difficult for Korean mandarins to relinquish their old habits of micromanaging the economy.

But the world has changed, and the international economy has shifted. Today's cutting-edge global businesses require both nimbleness and real-time monitoring of fast-moving markets around the world that no desk-bound Korean mandarins, how smart they may be, can successfully manage.

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Conclusion

The organizers of this conference began by asking "whither or wither" the global economy. Today's excellent panel discussions suggest that it's far too soon to know the answer to that question. While there is significant international agreement on the need to rebalance the world economy, there exists little consensus on what concrete measures should be taken, and political pressures to take short-sighted protectionist measures are likely to mount as economies in the developed world increasingly feel the double pain of austerity and unemployment.

The Great Recession has not become the earth-devouring monster we feared during those panicked last months of 2008; the recovery has not been the strong one we hoped for as those fears began to dissipate. We are still very much in the process of climbing out of the deep hole of recession, and political maneuvering or another economic emergency could easily send us tumbling backwards.

This conference has taught us how to think about what the future of the global economy might look like, and how we should get there. We are constrained as always by the vantage of the present. Perhaps a year from now, maybe in Seoul or again in D.C., we propose that we try to peer again through the looking glass, as then we will be another year down the road and we will have better data on both the political and economic sides of the slow global recovery. Given the fact that these are the most important events we are likely to see in our professional lives, getting it right is imperative. The path forward to a more robust, fully-functioning world economy promises to be a long one, and it is certainly worth pausing every now and again to make sure we remain on the right trail.

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