WORLD ECONOMIC OUTLOOK
April 2007

Spillovers and Cycles in the Global Economy

International Monetary Fund
CONTENTS

How the United States Affects the Global Economy—A Model-Based Simulation Analysis 144
Summary and Conclusions 147
Appendix 4.1. Econometric Methodology 149
Appendix 4.2. Common Elements in International Business Cycle Fluctuations:
Description of the Dynamic Factor Models 152
References 157

Chapter 5. The Globalization of Labor 161
How Globalized Is Labor? 162
How Has the Globalization of Labor Affected Workers in Advanced Economies? 166
Summary and Policy Implications 180
Appendix 5.1. Data Sources and Methods 181
References 189

Annex: IMF Executive Board Discussion of the Outlook, March 2007 193

Statistical Appendix 199
Assumptions 199
What’s New 199
Data and Conventions 202
Classification of Countries 205
General Features and Composition of Countries in the World Economic Outlook
Classification 205
List of Tables
Output (Tables 1–6) 211
Inflation (Tables 7–11) 222
Financial Policies (Tables 12–19) 230
Foreign Trade (Tables 20–24) 239
Current Account Transactions (Tables 25–31) 247
Balance of Payments and External Financing (Tables 32–36) 262
External Debt and Debt Service (Tables 37–42) 272
Flow of Funds (Table 43) 281
Medium-Term Baseline Scenario (Tables 44–45) 285

World Economic Outlook and Staff Studies for the World Economic Outlook, Selected Topics 289

Boxes
1.1 Understanding the Link Between Oil Prices and the World Economy 17
1.2 Ensuring Fiscal Sustainability in G-7 Countries 24
1.3 Oil Consumption Across Major Countries: Is the United States Different? 30
1.4 Hedging Against Oil Price Volatility 36
2.1 Housing Market Slowdowns 52
2.2 Lessons from Successful European Labor Market Reformers 58
2.3 Is China Investing Too Much? 63
3.1 External Sustainability and Financial Integration 84
3.2 Large and Persistent Current Account Imbalances 97
3.3 Exchange Rate Pass-Through to Trade Prices and External Adjustment 100
4.1 Financial Linkages and Spillovers 130
4.2 Macroeconomic Conditions in Industrial Countries and Financial Flows to Emerging Markets 133
4.3 Spillovers and International Business Cycle Synchronization: A Broader Perspective 142
5.1 Emigration and Trade: How Do They Affect Developing Countries? 175
A1 Economic Policy Assumptions Underlying the Projections for Selected Advanced Economies 200

Tables

1.1 Overview of the World Economic Outlook Projections 2
1.2 Emerging Market and Developing Countries: Net Capital Flows 8
1.3 Major Advanced Economies: General Government Fiscal Balances and Debt 29
1.4 Global Oil Demand by Region 41
1.5 Effects of Petroleum Products on Production of Selected Grains in the United States 44
2.1 Advanced Economies: Real GDP, Consumer Prices, and Unemployment 49
2.2 Advanced Economies: Current Account Positions 51
2.3 Selected Asian Countries: Real GDP, Consumer Prices, and Current Account Balance 61
2.4 Selected Western Hemisphere Countries: Real GDP, Consumer Prices, and Current Account Balance 66
2.5 Commonwealth of Independent States: Real GDP, Consumer Prices, and Current Account Balance 69
2.6 Selected African Countries: Real GDP, Consumer Prices, and Current Account Balance 72
2.7 Selected Middle Eastern Countries: Real GDP, Consumer Prices, and Current Account Balance 75
3.1 Summary Statistics of Episodes of Reversals 88
3.2 Standard Trade Model: Estimates of U.S. Trade Elasticities 96
3.3 List of Reversal Episodes 109
3.4 List of Large and Persistent Episodes 111
3.5 Advanced Economies: Contractionary and Expansionary Deficit Reversals 112
3.6 Emerging Markets: Contractionary and Expansionary Surplus Reversals 112
3.7 Variable Definitions 113
3.8 Standard Empirical Trade Model: Long-Run U.S. Trade Elasticities 114
3.9 Long-Run U.S. Trade Elasticities and Aggregation Bias 115
3.10 Long-Run U.S. Import Elasticities and Vertical Integration 115
3.11 Nonlinearity Tests (p value) and Thresholds for Changes in Relative Import Prices 116
4.1 Role of Large Economies in the Global Economy 122
4.2 Export Orientation by Region 125
4.3 External Portfolio Assets and Liabilities by Region 126
4.4 U.S. Downturns and Global Growth 127
4.5 Growth and Spillovers (1) 136
4.6 Growth and Spillovers (2) 136
4.7 Contributions to Output Fluctuations 140
4.8 Consumption 156
4.9 Investment 156
4.10 Contributions to Business Cycle Fluctuations in G-7 Countries 157
5.1 Classification of Sectors by Skill Intensity 182
5.2 Impact of Labor Globalization and Technological Change on Labor Shares 187
5.3 Impact of Labor Globalization and Technological Change on Skilled and Unskilled Labor Shares 188

Figures

1.1 Global Indicators 1
1.2 Current and Forward-Looking Indicators 3
1.3 Global Inflation 4
1.4 Developments in Mature Financial Markets 5
1.5 Mature Financial Market Indicators 6
1.6 Emerging Market Financial Conditions 7
1.7 External Developments in Major Advanced Economies 10
1.8 External Developments in Emerging Market Countries 11
1.9 Global Outlook 12
1.10 Risks to the Global Outlook 13
1.11 Productivity and Labor Cost Developments in Selected Advanced Economies 14
1.12 Measures of the Output Gap and Capacity Pressures 15
1.13 Current Account Balances and Net Foreign Assets 16
1.14 Global Productivity Performance 20
1.15 Global Saving, Investment, and Current Accounts 21
1.16 Saving and Investment in Emerging Market and Oil-Producing Economies 22
1.17 Average Petroleum Spot and Futures Prices, and Selected Energy Product Prices 35
1.18 Demand and Prices of Petroleum Products in Selected Developing and OECD Countries 40
1.19 Oil Supply, OECD Inventories, and OPEC Spare Capacity 41
1.20 Actual and Expected Semiannual World Consumption and Non-OPEC Production Growth, and Brent Crude Oil Prices 42
1.21 Commodity Price Indices and Selected Metals and Food Price Indices 43
1.22 Semiconductor Market 45
2.1 United States: How Much Will the U.S. Economy Slow? 48
2.2 United States: Developments in the Residential and Nonresidential Construction Sectors 50
2.3 Western Europe: Productivity Is Failing to Catch Up 54
2.4 Western Europe: Need to Do More to Raise Labor Utilization 55
2.5 Japan: Understanding Developments in Domestic Demand 57
2.6 Emerging Asia: Assessing the Resilience to a Global Slowdown 62
2.7 Latin America: Productivity Is Lagging 68
2.8 Emerging Europe: Convergence with the European Union 70
2.9 Commonwealth of Independent States (CIS): Further Reform Needed to Raise Investment Levels 74
2.10 Sub-Saharan Africa: Can Recent Growth Momentum Be Sustained? 76
2.11 Middle East: Investment in Non-Oil Sectors Key to Employment Growth 78
3.1 Episodes of Deficit Reversals and Large and Persistent Deficits 83
3.2 Advanced Economies: Key Indicators During Deficit Reversals 89
3.3 Deficit Reversals in Advanced Economies: Episode Characteristics by Average Change in GDP Growth 90
3.4 Advanced Economies: Total Change in Real Effective Exchange Rate and Average Change in GDP Growth During Deficit Reversals 91
3.5 Episodes of Surplus Reversals and Large and Persistent Surpluses 92
3.6 Key Indicators During Surplus Reversals 93
3.7 Surplus Reversals in Emerging Markets: Episode Characteristics by Average Change in GDP Growth 94
3.8 Oil Exporters: Surplus Reversals 95
3.9 Thresholds in Relative Trade Prices, Real Effective Exchange Rate, and Flexibility of Markets 104
3.10 United States: Trade Flows, Real Effective Exchange Rate (REER), and Growth Differential with Trading Partners 105
3.11 Required Exchange Rate Change for a 1 Percentage Point Reduction in the Ratio of U.S. Trade Deficit to GDP 106
3.12 Sectoral Price Elasticities of Trade 114
4.1 U.S. Recessions and Real GDP Growth by Region 121
4.2 Trade Orientation 124
4.3 United States: Real Imports, Real Effective Exchange Rate, Real Stock Returns, and Interest Rates During Recessions and Slowdowns 128
4.4 Output Gaps and Structural Characteristics During U.S. Recessions 129
4.5 Growth Declines and Spillovers: Regional Implications 137
4.6 Impact of Growth Declines in the United States and Japan 138
4.7 Global Factor 141
4.8 Global Implications of a Disturbance to U.S. Private Demand 145
4.9 Global Growth and Inflation with Correlated Disturbances and Delayed Monetary Policy Response 147
4.10 Limited In-Sample Persistence of U.S. Growth Shocks 150
4.11 Impact of U.S. Growth Declines on Growth in Latin America: Effects by Country 151
4.12 Impact of Euro Area Growth Declines on Growth in Latin America: Effects by Country 152
4.13 Impact of U.S. Growth Declines on Growth in Emerging Asia: Effects by Country 153
4.14 Impact of Japanese Growth Declines on Growth in Emerging Asia: Effects by Country 154
5.1 Alternative Measures of Global Labor Supply 162
5.2 Immigration and Trade 163
5.3 Share of Developing Countries in Trade 164
5.4 Developing Countries: Exports of Skilled Manufacturing Goods and Services 165
5.5 Offshoring by Advanced Economies 166
5.6 Advanced Economies: Offshoring by Category of Inputs 167
5.7 Advanced Economies: Labor Income Shares 168
5.8 Advanced Economies: Labor Compensation and Employment 170
5.9 Advanced Economies: Labor Compensation and Employment in Skilled and Unskilled Sectors 171
5.10 Catch-Up by Emerging Markets’ Manufacturing Wages 172
5.11 Information and Communications Technology (ICT) Capital, Patents, and Labor Market Indicators 173
5.12 Contributions to the Annual Change in Labor Share 174
5.13 Advanced Economies: Contributions to the Annual Change in the Labor Share by Skill Level 178
5.14 Effects of Changes in Trade Prices on Labor Share, Output, and Labor Compensation 179
5.15 Advanced Economies’ Labor Income Share, Labor Compensation, and Employment: Robustness to Alternative Skill Classification 182
A number of assumptions have been adopted for the projections presented in the World Economic Outlook. It has been assumed that real effective exchange rates will remain constant at their average levels during January 26–February 23, 2007, except for the currencies participating in the European exchange rate mechanism II (ERM II), which are assumed to remain constant in nominal terms relative to the euro; that established policies of national authorities will be maintained (for specific assumptions about fiscal and monetary policies in industrial countries, see Box A1); that the average price of oil will be $60.75 a barrel in 2007 and $64.75 a barrel in 2008, and remain unchanged in real terms over the medium term; that the six-month London interbank offered rate (LIBOR) on U.S. dollar deposits will average 5.3 percent in 2007 and 5.1 percent in 2008; that the three-month euro deposits rate will average 3.8 percent in 2007 and 3.7 percent in 2008; and that the six-month Japanese yen deposit rate will yield an average of 0.9 percent in 2007 and of 1.2 percent in 2008. These are, of course, working hypotheses rather than forecasts, and the uncertainties surrounding them add to the margin of error that would in any event be involved in the projections. The estimates and projections are based on statistical information available through end-March 2007.

The following conventions have been used throughout the World Economic Outlook:

. . . to indicate that data are not available or not applicable;
— to indicate that the figure is zero or negligible;
– between years or months (for example, 2005–06 or January–June) to indicate the years or months covered, including the beginning and ending years or months;
/ between years or months (for example, 2005/06) to indicate a fiscal or financial year.

“Billion” means a thousand million; “trillion” means a thousand billion.

“Basis points” refer to hundredths of 1 percentage point (for example, 25 basis points are equivalent to ¼ of 1 percent point).

In figures and tables, shaded areas indicate IMF staff projections.

Minor discrepancies between sums of constituent figures and totals shown are due to rounding.

As used in this report, the term “country” does not in all cases refer to a territorial entity that is a state as understood by international law and practice. As used here, the term also covers some territorial entities that are not states but for which statistical data are maintained on a separate and independent basis.
This report on the *World Economic Outlook* is available in full on the IMF’s Internet site, www.imf.org. Accompanying it on the website is a larger compilation of data from the WEO database than in the report itself, consisting of files containing the series most frequently requested by readers. These files may be downloaded for use in a variety of software packages.

Inquiries about the content of the *World Economic Outlook* and the WEO database should be sent by mail, electronic mail, or telefax (telephone inquiries cannot be accepted) to:

World Economic Studies Division  
Research Department  
International Monetary Fund  
700 19th Street, N.W.  
Washington, D.C. 20431, U.S.A.  
E-mail: weo@imf.org  
Telefax: (202) 623-6343
The analysis and projections contained in the World Economic Outlook are integral elements of the IMF’s surveillance of economic developments and policies in its member countries, of developments in international financial markets, and of the global economic system. The survey of prospects and policies is the product of a comprehensive interdepartmental review of world economic developments, which draws primarily on information the IMF staff gathers through its consultations with member countries. These consultations are carried out in particular by the IMF’s area departments together with the Policy Development and Review Department, the Monetary and Capital Markets Department, and the Fiscal Affairs Department.

The analysis in this report has been coordinated in the Research Department. The project has been directed by Charles Collyns, Deputy Director of the Research Department, and Tim Callen, Division Chief, Research Department.

The primary contributors to this report are Thomas Helbling, Subir Lall, S. Hossein Samiei, Peter Berezin, Roberto Cardarelli, Kevin Cheng, Florence Jaumotte, Ayhan Kose, Toh Kuan, Michael Kumhof, Douglas Laxton, Valerie Mercer-Blackman, Jonathan Ostry, Alessandro Rebucci, Nikola Spatafora, and Irina Tytell. Olga Akcadag, To-Nhu Dao, Christian de Guzman, Stephanie Denis, Nese Erbil, Angela Espiritu, Patrick Hettinger, Bennett Sutton, and Ercument Tulun provided research assistance. Mahnaz Hemmati, Laurent Meister, and Emory Oakes managed the database and the computer systems. Sylvia Brescia, Celia Burns, and Jemille Colon were responsible for word processing. Other contributors include Anthony Annett, Andrew Benito, Selim Elekdag, Robert Feenstra, Caroline Freund, Jean Imbs, George Kapetanios, Jaewoo Lee, Daniel Leigh, Jaime Marquez, Gian Maria Milesi-Ferretti, Prachi Mishra, Susana Mursula, Christopher Otrok, Cedric Tille, Shang-Jin Wei, and Johannes Wiegand. Archana Kumar of the External Relations Department edited the manuscript and coordinated the production of the publication.

The analysis has benefited from input during the early stages by Raghuram Rajan, the former Economic Counsellor, and from comments and suggestions by staff from other IMF departments, as well as by Executive Directors following their discussion of the report on March 21 and 26, 2007. However, both projections and policy assessments are those of the IMF staff and should not be attributed to Executive Directors or to their national authorities.
The World Economic Outlook team has again done an outstanding job of pulling together both the latest key global macroeconomic developments and the three analytical issues that are highly relevant for accurately reading the current economic environment. The team continues to be ably led by Charles Collyns and Tim Callen and the cornerstone is staff at all levels in the World Economic Studies Division. My predecessor as Economic Counsellor, Raghuram Rajan, contributed key insights during the early stages of preparation. I would also like to stress the importance of inputs both from other parts of the Research Department and—critically—from other departments at the IMF.

It may surprise readers to learn that this World Economic Outlook sees global economic risks as having declined since our last issue in September 2006. Certainly this is at odds with many recent newspaper headlines and commentary, which have focused on problems related to U.S. mortgages, the potential for “disorderly” unwinding of global imbalances, and worries about rising protectionist pressures.

Nevertheless, as discussed in Chapters 1 and 2, looking at the big picture, we actually see the continuation of strong global growth as the most likely scenario. The most immediate concern is bad news from the U.S. housing market, and an associated slowing of U.S. growth. However, these developments have been evident for some months and are largely reflected in market assessments of credit quality. These assessments remain positive for most types of credit. The spreads on lower-quality BBB-rated bonds backed by subprime mortgages have indeed widened substantially, but there has been little change in the yields of lower-rated corporate bonds, let alone those of investment-grade issues. The mainstream mortgage market remains open for business to people with good credit histories.

We should be careful not to underestimate the potential spillovers from the specific problems with high-risk mortgages in the United States but, compared with six months ago and based on the information available today, there is less reason to worry about the global economy. First of all, the overall U.S. economy is holding up well despite the sharp downturn in the housing sector. Investment has slowed somewhat, but consumption remains well supported by a strong labor market and healthy household balance sheets. Unemployment remains low and—in most parts of the U.S. economy—there are good prospects for sustained job growth. Even more important, the signs elsewhere are very encouraging. The euro area is experiencing its fastest growth in six years, Japan’s expansion has momentum, and emerging market and developing countries—led by China and India—continue to enjoy remarkable growth. Overall, taking the five-year period of 2003–07 as a whole, the global economy is achieving its fastest pace of sustained growth since the early 1970s.

These developments, however, do rightly focus our attention on the important issue of spillovers from the United States to the broader global economy. This is the timely focus of Chapter 4, which points out that major global growth slowdowns are generally not due to country-specific developments, even if the country in question is one of the world’s largest economies. Global growth typically declines sharply only when there are events that affect many countries at the same time. The chapter finds that rising trade and financial integration of the global economy does increase the potential impact of spillovers across economies, but even if the U.S. economy were to slow further, the scale of such spillovers should be manageable, especially recognizing the strengthening of macroeconomic policy management around the world over the past 20 years. Flexible exchange rates and forward-looking monetary policies reduce the output effects from all kinds of shocks.

Turning to another risk highlighted in our September 2006 report, there has been definite progress in the right direction with regard to global imbalances. There are encouraging signs that the U.S. cur-
rent account deficit is now stabilizing, albeit at a high level, helped by a real depreciation of the U.S. dollar and recent strong export performance. Moreover, policy steps have been taken, which, while small, are significant and very real. This movement in the right direction—particularly with regard to actual and intended changes in fiscal policy—is exactly what is needed at this time. However, obviously there is more to be done as the existing configuration of major current accounts is not sustainable indefinitely.

Chapter 3 reassesses the evidence on the role of exchange rates in external adjustment. It confirms that market-led real appreciations and depreciations can support macroeconomic policy changes and private sector saving and investment decisions by facilitating the reallocation of resources across sectors, and help to reduce imbalances without large fluctuations in output. In particular, the chapter pours some cold water on the “exchange rate pessimism” story, in which exchange rates move but do not contribute to current account adjustment. There is also no reason to believe that elasticities or other relevant parameters have declined recently for key countries, such as the United States. If anything, standard models may underestimate how much U.S. trade volumes are likely to respond to changes in relative prices.

Exchange rate adjustment is certainly not a panacea, but it can definitely lower the output costs that would otherwise be involved in changing current account positions. At the same time, we should never lose sight of the need to increase domestic demand in surplus countries, as well as to boost private and government net savings in the United States.

Chapter 5 continues a series of analytical pieces from previous issues of the World Economic Outlook on the process and consequences of the globalization of the world economy, which has been the principal wellspring of recent strong global economic performance. It focuses on the remarkable development of a bigger, more integrated worldwide market for labor. This is one of the central changes of the past 25 years and, in all likelihood, the associated changes will continue to be influential for at least another generation. In part, this global market has developed through the opening up of China, India, and the former communist bloc to the global trading system, as well as through the development of new communications and transportation technologies. But, in equal part, it has been made possible by increasing cross-border movements of financial capital that has sought out attractive skill-wage combinations even in what initially seemed to be unlikely parts of the world.

While there are some legitimate concerns about the pace and composition of those flows, it is important to put them in their proper perspective. This is not a short-run or second-order phenomenon, but rather a major secular shift in where capital finds labor. Put differently, it is the flow of capital and closely associated talent (global management and global ideas) to places where strong complementary skills (including local management and local ideas) are available at attractive prices. This “flow” into emerging markets is really a mutually beneficial set of exchanges that has made possible the creation of a larger global market for labor at low, medium, and high wages. This, in turn, has had great benefits both for the countries using better access to finance to grow faster as well as for everyone who consumes the goods that these countries produce.

The globalization of labor also has had consequences for the distribution of income, and this should not be overlooked. The labor share of income has declined over time in the advanced economies, especially in Europe, and for workers in unskilled sectors. Many factors have contributed, and the findings in Chapter 5 suggest that technological advances rather than globalization of labor is the most important element. The costs of adjustment are not small and, for the people involved, they can be truly traumatic. In fact, it is exactly the loss of jobs in some regions of the United States—due to globalization of labor as well as to technology changes—that has created the most serious reason to worry about parts of the U.S. housing market. If you lose your job, this makes it much harder to service your mortgage, and the increase in distress sales and foreclosures puts downward pressure on house
prices. This makes it all the more important, from both a welfare and a macroeconomic perspective, to address the costs of adjustment, including through adequate labor market flexibility, good education and training, and safety nets that cushion but do not obstruct the process of change.

To be clear, the overall risks to global growth remain weighted to the downside, and any slowdown will further complicate people’s lives. But as long as macroeconomic and structural policies are designed and implemented with these risks and real people in mind, a strong global economy should be maintained. And we need to take full advantage of the opportunity that this period provides to push ahead with deep, difficult reforms to ensure both that strong growth can be sustained despite challenges such as population aging and that the benefits of this growth can be shared across all segments of the population.

Simon Johnson

*Economic Counsellor and Director, Research Department*