



FINANCE and DEVELOPMENT

www.imf.org/fandd

September 2009

**Faces
of the Crisis**

**Blanchard on
Sustaining Global
Recovery**

**Frankel: In and
Out in Global
Money**

**Kahneman:
Questioning
a Chastened
Priesthood**

**Crockett on Fixing
Financial Regulation**

**Where Do We Go
from Here?**

Finance & Development, September 2009 \$8.00



MFIEA2009003

Finance & Development is published quarterly in English, Arabic, Chinese, French, Russian, and Spanish by the International Monetary Fund. English edition ISSN 0015-1947

EDITOR-IN-CHIEF

Jeremy Clift

MANAGING EDITOR

Marina Primorac

SENIOR EDITORS

Camilla Andersen
Hyun-Sung Khang
James Rowe
Simon Willson

ASSISTANT EDITORS

Maureen Burke
Jacqueline Deslauriers
Glenn Gottselig
Natalie Ramirez-Djumena

CREATIVE DIRECTOR

Luisa Menjivar

ART EDITOR

Lai Oy Louie

EDITORIAL ASSISTANTS

Lijun Li
Kelley McCollum
Niccole Braynen-Kimani

ADVISORS TO THE EDITOR

Bas Bakker
Tim Callen
Adrienne Cheasty
Ana Corbacho
Alfredo Cuevas
Marcello Estevão
Domenico Fanizza
James Gordon
Thomas Helbling
Paul Hilbers
Paolo Mauro
Gian Maria Milesi-Ferretti
Paul Mills
Uma Ramakrishnan

**Subscriber services,
Changes of address, and
Advertising inquiries**

IMF Publication Services
700 Nineteenth Street, NW
Washington, DC, 20431, USA
Telephone: (202) 623-7430
Fax: (202) 623-7201
E-mail: publications@imf.org

Postmaster: please send changes of address to *Finance & Development*, International Monetary Fund, Washington, DC, 20431, USA. Periodicals postage is paid at Washington, DC, and at additional mailing offices. The English edition is printed at United Lithographers Inc., Ashburn, VA.

© 2009 by the International Monetary Fund. All rights reserved. Requests for permission to reproduce articles for **noncommercial** purposes should be sent to the Editor-in-Chief, *Finance & Development* International Monetary Fund Washington, DC, 20431, USA Telephone: **(202) 623-8300** Fax: **(202) 623-6149** Website: www.imf.org/fandd Permission for any **commercial** purposes may be secured online from the **Copyright Clearance Center** at its website, www.copyright.com. A nominal fee will be collected for using this service.

Opinions expressed in articles and other materials are those of the authors; they do not necessarily reflect IMF policy.



FINANCE & DEVELOPMENT A QUARTERLY PUBLICATION OF
THE INTERNATIONAL MONETARY FUND
September 2009 • Volume 46 • Number 3

FEATURES

WHERE DO WE GO FROM HERE?

- 8 Sustaining a Global Recovery**
The recovery has started. Sustaining it will require delicate rebalancing acts, both within and across countries
Olivier Blanchard
- 13 What's In and Out in Global Money**
Things are hot, then they are not, in the world of international money
Jeffrey A. Frankel
- 18 Rebuilding the Financial Architecture**
What needs to be done to strengthen financial regulation and supervision?
Andrew Crockett
- 20 Looking Ahead**
Countries must begin now to devise economic strategies to accompany recovery
Carlo Cottarelli and José Viñals
- 24 Growth after the Crisis**
If the world economy is to recover, a replacement must be found for the newly frugal U.S. consumer
Francesco Giavazzi
- 26 The Future of Reserve Currencies**
For nearly a century, the U.S. dollar has reigned supreme, but are those days over?
Benjamin J. Cohen
- 32 Overhauling the System**
United States proposes most radical reform of financial regulation since the New Deal
Randall Dodd
- 35 Anticipating the Next Crisis**
What can early warning systems be expected to deliver?
Atish R. Ghosh, Jonathan D. Ostry, and Natalia Tamirisa
- 38 Faces of the Crisis**
How the crisis has affected six people in different circumstances around the world



ALSO IN THIS ISSUE

- 48 Dial Growth**
Handheld devices are enabling nascent economies to skip a generation of development
Olivier Lambert and Elizabeth Littlefield

Nurturing a Recovery

THE recovery from the deepest recession in 60 years has started. But sustaining it will require delicate rebalancing acts, both within and across countries. IMF chief economist Olivier Blanchard writes in our lead article that the turnaround will not be simple. The crisis has left deep scars that will affect both supply and demand for many years to come.

Policymakers around the world will face a daunting task over the coming months maintaining supportive policies while simultaneously planning for their well-timed reversal. This is not the end of the policy challenges, however. Even when the recession is past, several longer-term structural issues will have to be addressed if the global economy is to return to solid and sustained growth.

This issue of *F&D* looks at what's next in the global crisis and beyond. We look at ways of unwinding crisis support, the shape of growth worldwide after the crisis, ways of rebuilding the financial architecture, and the future of reserve currencies. Jeffrey Frankel examines what's in and what's out in global money, while a team from the IMF's Research Department looks at what early warning systems can be expected to deliver in spotting future problems.

In our regular People in Economics profile, we speak to Nobel prize winner Daniel Kahneman, whose work led to the creation of the field of behavioral economics, and our Picture This feature gives a timeline of how the Bank of England's policy rate has fallen to its lowest level in 300 years.

Jeremy Clift
Editor-in-Chief

- 51 Delivering on Change**
The IMF has created a new support framework for the world's low-income countries
Edward Gemayel and Samar Maziad

DEPARTMENTS

- 3 In Brief**
Increasing global liquidity; Hunger at historic high; Gadgets and gigawatts; IMF blog

- 4 People in Economics**
Questioning a Chastened Priesthood
Jeremy Clift profiles psychologist Daniel Kahneman



- 30 Picture This**
The Three-Hundred-Year Low
The Bank of England's policy rate is the lowest ever
André Meier and Simon Willson

- 46 Back to Basics**
What Is Monetary Policy?
Koshy Mathai

- 53 Book Reviews**
Dead Aid: Why Aid Is Not Working and How There Is a Better Way for Africa, Dambisa Moyo
Successes of the International Monetary Fund: Untold Stories of Cooperation at Work, Eduard Brau and Ian McDonald, editors
Money, Finance and Political Economy: Getting It Right, Deena Khatkhate

- 57 Data Spotlight**
Flows to Eastern Europe
Foreign banks have supported eastern European banks, but the financial crisis has reversed this trend
José C. Moreno and Ricardo Davico

Illustration: Cover, Michael Glenwood; p. 3, istockphoto; p. 13, ImageZoo/Corbis; p. 27, Bruce Macpherson.

Photography: p. 3, Gideon Mendel/Corbis; p. 4, Sean Gallup, Getty Images/IMF photo illustration; p. 8, Andrew Lichtenstein/Corbis; p. 18, Ann Taylor-Hughes/istockphoto; p. 20, Etsa/Corbis; p. 24, Michael Spilotro, IMF; pp. 30-31, Rischgitz/Getty Images; Bettman/Corbis; Bettman/Corbis; Keystone/Getty Images; Keystone/Getty Images; Adrian Dennis/Newscom; p. 32, Stan Honda/AFP/Newscom; p. 35, Newscom; pp. 38-45, see Acknowledgments on p. 45; p. 48, Sandipan Majumdar; pp. 53-56, IMF Photo Unit.

It's Easy to Subscribe to *Finance & Development*

If you wish to receive regularly one of the following five print editions of *Finance & Development*—English, Arabic, Chinese, French, and Spanish—there are several ways to place an order.

Online and RSS feed:

Visit us at www.imf.org/fandd

By fax:

Fax your order to (202) 623-7201

By e-mail:

E-mail us at publications@imf.org

By conventional mail:

Fill out the form below and send it to:

International Monetary Fund

Publications Services

PO Box 2245, Williston, VT 05495-2245 USA

Telephone: (202) 623-7430

F&D is free to subscribers in developing countries.

Subscribers in developed countries will be charged US\$25 a year (four issues) for shipping and handling.



Please complete the information below:

| | |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| Please choose F&D language edition: <input type="checkbox"/> English <input type="checkbox"/> French <input type="checkbox"/> Spanish <input type="checkbox"/> Arabic <input type="checkbox"/> Chinese | |
| Full Name: | Address: |
| Company/Institution Name: | |
| | City: |
| Telephone: | State/Province: |
| Fax: | Postal code/Zip code: |
| E-mail: | Country: |

Organizational affiliation – Please select one of the options below:

| | |
|-------------------------------------------------------------------------------|------------------------------------------------------------------------|
| <input type="checkbox"/> Governmental | <input type="checkbox"/> International or Nongovernmental Organization |
| Educational <input type="checkbox"/> Faculty <input type="checkbox"/> Student | <input type="checkbox"/> News Media |
| <input type="checkbox"/> Other (please specify) | |

Payment options (not required for subscribers from developing countries)

\$25 payment enclosed. Please make checks payable to International Monetary Fund.

Please charge my credit card (circle one): Visa/MasterCard/American Express

Credit card number: _____ Expiration date: ____ / ____ / ____

Signature: _____ Order Date: _____

Increasing global liquidity

The IMF has injected \$250 billion into the global economy through a new allocation of Special Drawing Rights (SDRs), an IMF reserve asset. The move, approved by the IMF's Board of Governors on August 7, is designed to increase global liquidity by supplementing the Fund's 186 member countries' foreign exchange reserves.

The equivalent of nearly \$100 billion of the allocation went to emerging markets and developing countries, of which low-income countries received more than \$18 billion.

Low-income countries are also being helped by new IMF measures that have sharply increased the loan monies available to them. The resources—some of which will come from the planned sale of IMF gold—are expected to boost the Fund's concessional lending to up to \$17 billion through 2014, including to \$8 billion over the next two years.

In addition, the IMF has announced zero interest payments through end-2011 on its concessional loans to help low-income countries cope with the global economic crisis.

Hunger at historic high

World hunger is projected to reach a historic high in 2009, with more than 1 billion people going hungry every day, according to new estimates published by the UN Food and Agriculture Organization (FAO).

The increased hunger is a consequence of the world economic crisis and higher food prices, which has resulted in lower incomes and higher unemployment, the United Nations agency said. This year, the number of hungry people will grow by about 11 percent, the FAO projects.

In Asia and the Pacific, an estimated 642 million people are suffering from chronic hunger; in sub-Saharan Africa, 265 million; in Latin America and the Caribbean, 53 million; in the Near East and North Africa, 42 million; and in developed countries, 15 million.



A farmer in Laos winnows rice.

Gadgets and gigawatts

By 2010, there will be over 3.5 billion mobile phone subscribers, 1 billion personal computers, and 2 billion televisions in use around the world, says a study by the International Energy Agency. *Gadgets and Gigawatts* finds that the benefits these devices bring are going not only to people in wealthier nations, but also to the developing world. In Africa, for example, one in nine people now has a mobile phone.



But without new policies, the energy consumed by information and communications technologies as well as consumer electronics will double by 2022 and increase three-fold by 2030, jeopardizing efforts to increase energy security and reduce greenhouse gas emissions, the study

notes. And the rising demand for technology worldwide will likely overshadow any savings from improvements in the efficiency of electronic devices.

IMF blog

The IMF has launched a new policy blog—*IMFdirect*—covering the global economy and policy related to the crisis. Written by senior Fund economists with a broad range of expertise, the blog contains musings on the institution's work in economics and finance. Recent posts highlight the debate over policy responses to the biggest global recession since the Great Depression. Visit the blog at <http://blog-imfdirect.imf.org/>

The IMF has also begun producing *The State of Public Finances: A Cross-Country Fiscal Monitor*, a new online publication that analyzes public finances around the world. The *Monitor* will appear each April and October, with shorter quarterly updates as warranted.

Events in 2009

October 6–7, Istanbul, Turkey

Annual Meetings of the IMF and the World Bank

November 5–6, Washington, D.C.

IMF Tenth Annual Jacques Polak Research Conference

November 8–10, New Delhi, India

World Economic Forum's India Economic Summit

November 14–15, Singapore

Asia-Pacific Economic Cooperation Economic Leaders' Meeting

November 16–18, Rome, Italy

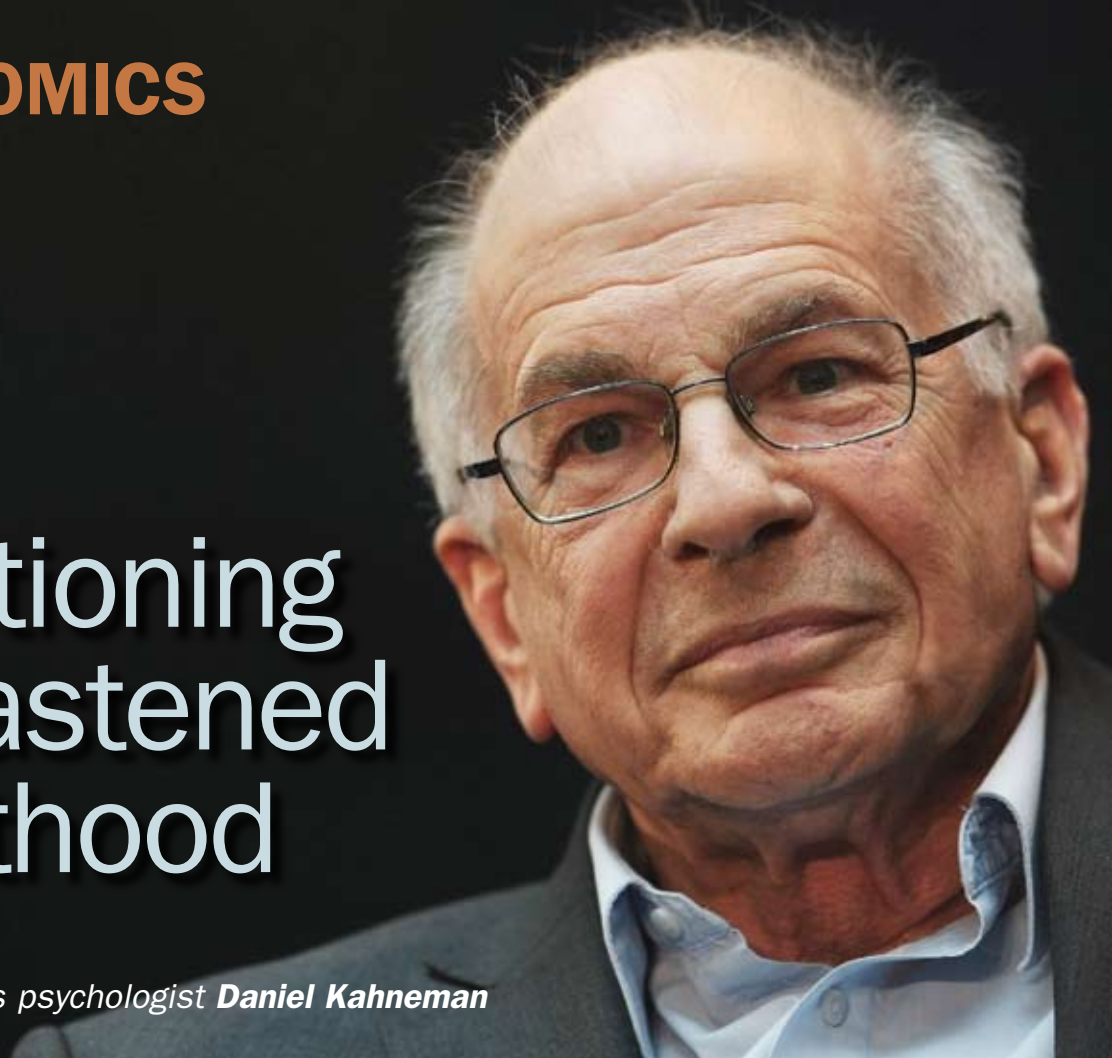
World Summit of Heads of State and Government on Food Security

December 7–18, Copenhagen, Denmark

United Nations Climate Change Conference

Questioning a Chastened Priesthood

Jeremy Clift profiles psychologist **Daniel Kahneman**



FOR Daniel Kahneman, one of the most moving episodes in the current global economic crisis took place when a humbled Alan Greenspan, the former chairman of the U.S. Federal Reserve, confessed before a congressional committee that he had put too much faith in the self-correcting power of free markets.

“He basically said that the framework within which we had been operating was false, and coming from Greenspan, that was impressive,” said Kahneman, who was awarded the Nobel Prize in Economics in 2002 for his pioneering work integrating aspects of psychological research into economic science.

But more to the point for Kahneman was how Greenspan, in his testimony, treated not only individuals but also financial institutions as rational agents. “That seemed to me to be ignoring not only psychology but also economics. He appeared to have a belief in the magic power of the market to discipline itself and yield good outcomes.”

Kahneman goes to great pains to stress that, as a psychologist, he is an outsider in the field of economics. But he helped lay the foundation for a new field of research, called *behavioral economics*, that challenged standard economic rational-choice theory to inject more realistic assumptions about human judgment and decision making.

Standard economic models assume that individuals will rationally try to maximize their benefits and minimize their costs. But, overturning some of the traditional tenets, behavioral economists show that people often make decisions based on guesses, emotion, intuition, and rules of thumb, rather than on cost-benefit analyses; that markets are plagued by herding behavior and groupthink; and that individual choices can frequently be affected by how prospective decisions are framed.

Overconfidence drives capitalism

The global economic crisis, which had its roots in the decisions of individuals and financial institutions to invest in subprime mortgages, has put behavioral economics and the way humans make decisions in the spotlight.

“The people who took on subprime mortgages were thoroughly deluded,” says Kahneman during an interview with *F&D* at his house in the spectacular Berkeley hills overlooking San Francisco. “One of the main ideas in behavioral economics that is borrowed from psychology is the prevalence of overconfidence. People do things they have no business doing because they believe they’ll be successful.” Kahneman calls this “delusional optimism.”

Delusional optimism, he says, is one of the forces that drive capitalism. Many people don't understand the risks they are taking, says Kahneman—a theme echoed in a book by Nassim Taleb called *The Black Swan* (2007), which points out that people fail to take into adequate consideration the possible impact of rare but earth-shattering events that prove wrong their assumptions about the future.

“Entrepreneurs are people who take risks and, by and large, don't know they are taking them,” he argues. “This happens with mergers and acquisitions, but it also happens at the level of small-scale entrepreneurs. In the United States, a third of small businesses fail within five years, but when you interview those people, they individually think they have between 80 percent and 100 percent chance of success. They just don't know.”

Two sides or more

Kahneman, who was raised initially in Paris and later in Palestine, was born in Tel Aviv in 1934. He says he is unsure if his vocation as a psychologist was a result of an early exposure to interesting gossip, or whether his interest in gossip was an indication of a budding vocation.

“Like many other Jews, I suppose, I grew up in a world that consisted exclusively of people and words, and most of the words were about people. Nature barely existed, and I never learned to identify flowers or to appreciate animals,” he said in his autobiography. “But the people my mother liked to talk about with her friends and with my father were fascinating in their complexity. Some people were better than others, but the best were far from perfect and no one was simply bad.” Most of her stories were touched by irony, he says, and they all had two sides or more.

An early event in Nazi-occupied Paris that he remembers vividly left a lasting impression because of varied shades of meaning and implications about human nature. “It must have been late 1941 or early 1942. Jews were required to wear the Star of David and to obey a 6 p.m. curfew. I had gone to play with a Christian friend and had stayed too late. I turned my brown sweater inside out to walk the few blocks home. As I was walking down an empty street, I saw a German soldier approaching. He was wearing the black uniform that I had been told to fear more than others—the one worn by specially recruited SS soldiers. As I came closer to him, trying to walk fast, I noticed that he was looking at me intently. Then he beckoned me over, picked me up, and hugged me. I was terrified that he would notice the star inside my sweater. He was speaking to me with great emotion, in German. When he put me down, he opened his wallet, showed me a picture of a boy, and gave me some money. I went home more certain than ever that my mother was right: people were endlessly complicated and interesting.”

His family moved to Palestine in 1946 and he got his first degree in psychology, with a minor in mathematics, from the Hebrew University in Jerusalem. He was drafted into the Israeli military in 1954 and, after a year as a platoon leader, he was asked to evaluate combat troops and their potential for leadership. A groundbreaking interview system for assigning

new soldiers to appropriate posts that he devised is still in use today, with only minor modifications.

He graduated from the University of California, Berkeley in 1961, becoming a faculty member of the Hebrew University from 1961 to 1978, spending sabbaticals abroad at Harvard and Cambridge, among others. It was while working in Jerusalem that he fostered a partnership that was to lead to the Nobel Prize in a field that he had not studied—economics.

New field of research

Kahneman, now Professor of Psychology and Public Affairs Emeritus at the Woodrow Wilson School at Princeton, was awarded the prize in 2002 for work he had done with fellow psychologist Amos Tversky. Tversky, with whom he collaborated for more than a decade, died in 1996 and the prize is not granted posthumously. “Amos and I shared the wonder of together owning a goose that could lay golden eggs—a joint mind that was better than our separate minds,” Kahneman said of their joint work.

In presenting the prize, the Nobel Committee said Kahneman had integrated insights from psychology into economics, thereby laying the foundation for a new field of research. The prize was awarded jointly with Vernon Smith, who laid the foundation for the separate field of experimental economics (see *F&D* March 2003).

Kahneman's main findings focus on decision making in situations where things are uncertain. He demonstrated how human decisions may systematically depart from those predicted by standard economic theory. With Tversky, he formulated “prospect theory” as an alternative that better accounts for observed behavior. Kahneman also discovered how human judgment may take intuitive shortcuts that systematically depart from basic principles of probability. “His work has inspired a new generation of researchers in economics and finance to enrich economic theory using insights from cognitive psychology into intrinsic human motivation,” the Nobel citation said.

Prospect theory helps to illuminate experimental results that show individuals often make divergent choices in situations that are substantially identical but framed in a different way. Their paper became the second-most-cited article to appear in *Econometrica*, the prestigious academic journal of economics, during 1979–2000 (Kahneman and Tversky, 1979). The research has had an influence across a range of disciplines, including marketing, finance, and consumer choice.

Kahneman says little should be read into the theory's name. “When we were ready to submit the work for publication, we deliberately chose a meaningless name for our theory: ‘prospect theory.’ We reasoned that if the theory ever became well known, having a distinctive label would be an advantage. This was probably wise.”

Through their collaboration, Kahneman and Tversky examined why an individual's response to loss is much more intense than one's response to gain, leading to the notion of loss aversion, one of the main fields of study in behavioral economics.

The two psychologists also found empirically that people underweight outcomes that are merely probable in comparison with outcomes that are obtained with certainty. This tendency contributes to risk aversion in choices involving sure gains and to risk seeking in choices involving sure losses—helping explain why a gambler on a losing streak refuses to accept the sure loss and gambles on, hoping to break even.

“People [are] willing to gamble on in the hope of recovering their losses,” Kahneman said in a broadcast interview at Berkeley in 2007. This led him to worry that national leaders who have led a country close to defeat in a war are more likely to put more at risk than to settle.

They also found that people have inconsistent preferences when the same choice is presented in different forms, helping explain irrational economic behaviors such as why people will drive to a distant store for a discount on a low-cost item but not for the same discount on something expensive.

Building a discipline

How prospect theory became applied to economics seems almost an accident of publishing. Kahneman and Tversky chose to publish in *Econometrica* rather than the *Psychological Review* because *Econometrica* had published earlier work on decision making—thus bringing their research to the attention of economists.

Kahneman points to his collaboration with longtime research partner and friend Richard Thaler, professor of economics and behavioral science at the University of Chicago, as contributing to the development of the field of behavioral economics.

“Although I do not wish to renounce any credit for my contribution, I should say that in my view the work of integration was actually done mostly by Thaler and the group of young economists that quickly began to form around him, starting with Colin Camerer and George Loewenstein, and followed by the likes of Matthew Rabin, David Laibson, Terry Odean, and Sendhil Mullainathan.”

Kahneman says that he and Tversky provided “quite a few of the initial ideas that were eventually integrated into the thinking of some economists, and prospect theory undoubtedly afforded some legitimacy to the enterprise of drawing on psychology as a source of realistic assumptions about economic agents.”

Thaler, who wrote the “Anomalies” column in the *Journal of Economic Perspectives* from 1987 to 1990, with occasional contributions since, says Kahneman’s work with Tversky is the reason today’s thriving field of behavioral economics exists. “Their work provided the conceptual framework that made our field possible.”

Boosted by the crisis

The buzz created by the award of the Nobel Prize, plus the introspection among chastened economists triggered by the global economic crisis, has given a big boost to behavioral economics, so much so that it has begun to seep into the current White House through books such as *Nudge* (Thaler and

Sunstein) and *Predictably Irrational* by Duke University professor Dan Ariely.

Nudge examines how people make choices and how they can be nudged into making better decisions for themselves on a range of issues, such as buying more healthy food or opting to save more.

“It’s very clear that this is a good time for behavioral economics,” says Kahneman with a smile.

Not everyone agrees that behavioral economics is the thing of the future, seeing it as something of a passing and intrusive fad. “Certainly behavioral economics is all the rage these days. The casual reader might have the impression that the rational *homo economicus* has died a sad death and the economics profession has moved on to recognize the true irrationality of humankind. Nothing could be further from the truth,” says David Levine of the Washington University in St. Louis.

“Behavioral economists are right to point to the limitations of human cognition,” said Richard Posner of the Chicago University Law School. “But if they have the same cognitive limitations as consumers, should they be designing systems of consumer protection?”

“Perhaps the greatest challenge facing behavioral economics is demonstrating its applicability in the real world,” said Steven Levitt and John List in an article in *Science* magazine (2008). “In nearly every instance, the strongest empirical evidence in favor of behavioral anomalies emerges from the lab. Yet, there are many reasons to suspect that these laboratory findings might fail to generalize to real markets.”

Place in economics

Although behavioral economics has now reached the status of an established discipline taught at leading universities, “it remains a discipline that is organized around the failures of standard economics,” says Wolfgang Pesendorfer, Professor of Economics at Princeton.

But it is proving difficult to integrate it fully—although Wall Street and investment analysts do take account of cognitive factors and emotional issues that impact the decision-making process of individuals, groups, and organizations. “There are too many behavioral theories, most of which have too few applications,” says Drew Fudenberg of Harvard (2006).

Even prospect theory remains handicapped in the eyes of some by the lack of an accepted model for how reference points are set. “The key difference between psychologists and economists is that psychologists are interested in individual behavior while economists are interested in explaining the results of groups of people interacting,” said Levine in a 2009 lecture titled “Is Behavioral Economics Doomed?” at the European University Institute.

Lending credence

Nevertheless, the turmoil created by the subprime debacle and subsequent global crisis has given credence to the need to be more aware of human nature in regulation and economic policy.

Kahneman has a number of takeaways from the current crisis.

- **Need for stronger protection for consumers and individual investors.** “There’s always been an issue of whether, and how much, protection people need against their own choices,” he argues. “But I think it’s now just become very, very difficult to say that people don’t require protection.”

- **Failure of markets has much wider consequences.** “Interestingly enough, it turns out that when uninformed individuals lose their money, it ruins the global economy—so the irrational actions of individuals have much wider effects when combined with the rationality of corrupt agents within the financial system, and very lax regulation and supervision.”

- **Limits of forecasting.** “The tremendous volatility in the stock markets and financial system tells us something about the amount of uncertainty in the system and the limits of forecasting.”

Greenspan now seems to agree about problems with the forecasting and risk assessment models. In an article in the *Financial Times* in March last year, Greenspan saw human nature as a missing piece of the puzzle of why the burgeoning subprime crisis was not spotted earlier through risk management or econometric forecasting models.

“These models do not fully capture what I believe has been, to date, only a peripheral addendum to business-cycle and financial modeling—the innate human responses that result

Studying well-being

Continuing to tackle issues in human decision making, Kahneman now focuses on the study of hedonics—what makes experiences pleasant or unpleasant—and the development of a scientific measure of well-being. In one recent study examining money’s effect on happiness, Kahneman, and others, have found that people with a relatively high income, although more satisfied with their lives, are barely happier at any given moment than those with a significantly lower income. The age-old myth that money buys happiness needs to be refined, as does the competing myth that wealth does not matter.

What he’s found in comparative studies of nations is that both the level of corruption and the degree of trust in society are important predictors of well-being. “Corruption is a measure of trust in society, and trust, it turns out, should be essential to well-being.”

Countries where the level of trust in society is very low have a lot of difficulty thriving economically—so you need a certain level of trust to get moving.

“But even when you look at the Western world where GDP is more or less constant, you find large effects of trust, and that’s why Northern Europe always emerges as the best place to be in the world in terms of well-being research.”

Can this be applied in developing countries? “If there is a way of encouraging increasing trust in society—and that should probably start with trust in institutions—that is going to make a contribution to GDP through the rule of law, respect for property, and so on. It will have an extra contribution to human welfare because happier societies are ones where people trust each other and spend a fair amount of time catering to social needs.”

in swings between euphoria and fear that repeat themselves generation after generation with little evidence of a learning curve,” Greenspan wrote. “Asset-price bubbles build and burst today as they have since the early 18th century, when modern competitive markets evolved. To be sure, we tend to label such behavioral responses as non-rational. But forecasters’ concerns should be not whether human response is rational or irrational, only that it is observable and systematic.

“This, to me, is the large missing ‘explanatory variable’ in both risk-management and macroeconomic models.”

Thinking about thinking

In addition to his Nobel Prize in Economics, Kahneman has received recognition as a towering figure from the psychological profession. “Kahneman and his colleagues and students have changed the way we think about the way people think,” said then American Psychological Association President Sharon Stephens Brehm, when selecting Kahneman in 2007 for the profession’s highest award for Outstanding Lifetime Contributions to Psychology.

Kahneman keeps an inquisitive eye on developments in behavioral economics, but has long since moved on.

Today his work has shifted to the study of well-being, collaborating with Gallup on a world poll to measure global issues and attitudes in more than 150 countries (see box).

Challenging the priesthood

Kahneman has in the past likened the economics profession to a priesthood to which heretics have difficulty getting access. But he recognizes how far economics has advanced in the past three decades in embracing psychological research and elements of other social sciences.

“We published our article in *Econometrica* in 1979, so that was 30 years ago. In 2002, I was honored in Stockholm, so it is not a very rigid church, considering that during the first years economists largely ignored us.

“Yes, I have spoken of a church, but it is not a church where you get burned at the stake for being a heretic, because otherwise a lot of people wouldn’t be around!” ■

Jeremy Clift is Editor-in-Chief of Finance & Development.

References:

- Ariely, Dan, 2009, *Predictably Irrational* (New York: HarperCollins).
- Fudenberg, Drew, 2006, “Advancing Beyond Advances in Behavioral Economics,” *Journal of Economic Literature*, Vol. XLIV (September), pp. 694–711.
- Kahneman, Daniel, and Amos Tversky, 1979, *Prospect Theory: An Analysis of Decision under Risk*,” *Econometrica*, Vol. 47 (March), pp. 263–91.
- Levitt, Steven, and John List, 2008, “Homo Economicus Evolves,” *Science*, February 15, pp. 909–10.
- Taleb, Nassim Nicholas, 2007, *The Black Swan: The Impact of the Highly Improbable* (New York: Random House).
- Thaler, Richard H., and Cass R. Sunstein, 2008, *Nudge: Improving Decisions About Health, Wealth, and Happiness* (New Haven, Connecticut: Yale University Press).



Sustaining a

The recovery has started. Sustaining it will require delicate rebalancing acts, both within and across countries

Olivier Blanchard

IN normal recessions, however disruptive they are to businesses and jobs, things turn around predictably. The current global recession is far from normal.

Usually, to fight a recession, the central bank lowers interest rates, which results in increased demand and output. People resume buying durable goods such as appliances and cars. Firms start delayed investment projects. Often, an exchange rate depreciation gives a boost to exports by making them cheaper. The lower-than-normal growth during the recession gives way to higher-than-normal growth for some time, until the economy has returned to its normal growth path.

But the world is not in a run-of-the-mill recession. The turnaround will not be simple. The crisis has left deep scars, which will affect both supply and demand for many years to come.

Supply-side problems

Some parts of the economic system have broken. Some firms went bankrupt that would not have in a normal recession. In advanced countries, the financial systems are partly dysfunctional, and will take a long time to find their new shape. Meanwhile, financial intermediation—and, by implication, the process of reallocation of resources that is central to growth—will be



Global

Recovery

impaired. In emerging market countries, capital inflows, which decreased dramatically during the crisis, may not fully come back in the next few years. Changes in the composition of world demand, as consumption shifts from advanced to emerging economies, may require changes in the structure of production. In nearly all countries, the costs of the crisis have added to the fiscal burden, and higher taxation is inevitable.

All this means that we may not go back to the old growth path, that *potential output* may be lower than it was before the crisis.

How much has potential output decreased? It is difficult to tell: we do not see potential output, only actual output. The historical evidence is worrisome, however. The IMF's forthcoming *World Economic Outlook* presents evidence from 88 banking crises over the past four decades in a wide range of

countries. While there is large variation across countries, the conclusion is that, on average, output does not go back to its old trend path, but remains permanently below it.

The possible good news is that the trend itself appears to be unaffected: on average, crises permanently decrease the level of output, but not its growth rate. So, if past is prologue, the world economy likely will return to its past growth rate. But, especially in advanced countries, the period of above-average growth, characteristic of normal recoveries, may be short-lived or nonexistent.

Demand-side issues

Just achieving "normal" growth, however, may be hard because of demand problems. The forecasts now predict that growth will be positive in most countries, including advanced countries, for the next few quarters.

But there are two caveats to this news:

- Growth will not be quite strong enough to reduce unemployment, which is not expected to crest until some time next year.
- These positive growth forecasts are largely predicated on a combination of a fiscal stimulus and inventory rebuilding by firms, rather than on strong private consumption and fixed investment spending. Sooner or later, the fiscal stimulus will have to be phased out. And inventory adjustment will also naturally come to an end.

“Two rebalancing acts will have to come into play. First, rebalancing from public to private spending. Second, rebalancing aggregate demand across countries.”

The question, then, is what will sustain the recovery.

Two rebalancing acts will have to come into play. First, rebalancing from public to private spending. Second, rebalancing aggregate demand across countries, with a shift from domestic to foreign demand in the United States and a reverse shift from foreign to domestic demand in the rest of the world, particularly in Asia.

Rebalancing public and private spending

The fiscal response to the crisis was to increase government spending, lower taxes, and accept much larger fiscal deficits. Given the collapse of private demand, and the inability to reduce interest rates below zero, governments clearly chose the right response. But large deficits lead to rapid increases in debt, and, because debt levels were already high in many countries, such increases cannot go on for long. As large deficits continue, debt sustainability comes increasingly into question. And with this comes the risk of higher long-term interest rates, both because of anticipated crowding out of private borrowers by government borrowers and because of a higher risk of default.

How much longer can the fiscal stimulus continue? On its own, in most advanced countries, probably not very long. The average ratio of debt to gross domestic product (GDP) for the G-20 advanced economies was high before the crisis, and is forecast to exceed 100 percent in the next few years. (The situation is substantially different in a number of emerging market countries, where debt was much lower to start, and where there is more room for deficit spending.)

An important qualifier is “on its own.” The stimulus can be prolonged if, at the same time, structural measures are taken to limit the future growth of entitlement programs—whether from rising health care costs or from the effect of aging populations on retirement costs. The trade-off is fairly

attractive. IMF estimates suggest that the fiscal cost of future increases in entitlements is 10 times the fiscal cost of the crisis. Thus, even a modest cut in the growth rate of entitlement programs can buy substantial fiscal space for continuing stimulus.

Eventually, however, the fiscal stimulus will have to be phased out, and private demand must replace it. The source of that demand—whether consumption or investment—is a crucial issue.

Rebalancing demand across countries

The United States was not only at the origin of the crisis, it is central to any world recovery. Consumption represents 70 percent of total U.S. demand, and its decline was the main near-term cause of the fall in output in this crisis. The ratio of U.S. household saving to disposable income, which was close to zero in 2007, has increased to about 5 percent. Will the saving rate go back to its 2007 level? That would not be desirable, and is unlikely.

On the one hand, some of the increase in saving in the last year probably reflected a wait-and-see attitude on the part of consumers, an attitude that will go away as the smoke clears. On the other hand, the saving rate tends to go up as output and income expand. And even if financial wealth returned to its pre-crisis level—be it in housing (which seems undesirable and unlikely) or in stocks—and output returned to its trend path, U.S. consumers would still probably save more. The reason is that the crisis has made them more conscious of tail risks—events that are unlikely to occur but, when they do, have devastating consequences.

Before the crisis, it was an article of faith that housing prices rarely, if ever, decreased (a belief that was a main contributor to the crisis). Another article of faith, one backed by stronger historical evidence, was that investors could count on stocks yielding an annual rate of return of 6 percent. Last year’s decline in the stock market showed that those yields cannot be taken for granted, and that more saving may be needed to ensure a safe retirement. Thus, U.S. consumers are likely to save more, at least until they forget the lessons of the crisis. The best guess (and there is little more to go on) is that the U.S. household saving rate will remain at least at its current level. That means a 5 percentage point decline in the ratio of consumption to disposable income relative to the pre-crisis period, or about a 3 percentage point drop in the ratio of consumption to GDP. Put simply, 3 percent more of U.S. aggregate demand will have to come from something other than consumption.

Will it be from investment? This also seems unlikely. Housing investment, as a percentage of GDP, was too high in the years preceding the crisis, and it will take a long time to get rid of the backlog of houses. Until that happens, housing investment will be low. Will fixed investment, again as a percentage of GDP, be higher after the crisis than it was before? Probably not. Capacity utilization is at a historical low, and will take a long time to recover. While banks may be solvent now, they are still tightening credit, and tight lending standards are likely to last a while. Less-efficient financial intermediation will affect not only the supply side, but also the demand side.

Again, historical evidence from “creditless” recoveries suggests that investment will be weak for a long time.

Can low interest rates help?

It is likely that, at any given interest rate, U.S. private domestic demand will be weak for a long time, weaker than it was before the crisis. Note, however, the qualifier “at any given interest rate.” This appears to offer room for some optimism. The short-term riskless rate is lower now than it was in the pre-crisis years. Over the three years before the crisis, the average nominal U.S. treasury bill rate was 4 percent, while the average inflation rate was 3 percent. That resulted in a real—that is, after-inflation—rate of 1 percent. Today, the treasury bill rate is roughly zero and inflation expectations appear anchored around 2 percent. That implies a real rate of around –2 percent—that is, 3 percentage points below its pre-crisis level. The Federal Reserve can leave the policy rate—the federal funds rate—at zero if it needs to, and, because inflation expectations are more likely to increase than to decrease, real rates are likely to remain negative. An old rule of thumb is that a 1 percentage point lower real rate that is expected to remain so for some time leads to a roughly 1 percent increase in aggregate demand. A decrease in the real rate of 3 percentage points would seem sufficient to offset the caution of consumers and firms and sustain the recovery.

But it may not be. What matters for demand is the rate at which consumers and firms can borrow, not the policy rate itself. As was clear during this crisis, the rate at which consumers and firms borrow often is a lot higher than the policy rate. Risk premiums on U.S. BBB-rated bonds, for example, are nearly 3 percentage points higher than before the crisis. This higher risk perception may well be an enduring legacy of the crisis. (The Great Depression led to a large increase in the risk premium on stocks, which lasted for the better part of four decades. But the Depression lasted a long time, and this crisis appears unlikely to have the same psychological impact.) Higher risk premiums, then, could undo, at least in part, lower policy rates. U.S. policymakers cannot count on low interest rates alone to deliver a sustained U.S. recovery.

Can Asia help?

If the U.S. recovery is to take place, if the fiscal stimulus must be phased out, and if private domestic demand is weak, then U.S. net exports must increase. In other words, the U.S. current account deficit must decrease. That means that the rest of the world, now in substantial surplus, must reduce that current account surplus. Where should this reduction come from?

It is natural to look first at the countries with large current account surpluses. Among them, most prominently, are Asian countries. And most prominent among them is China. From the point of view of the United States, a decrease in China’s current account surplus would help increase demand and sustain the U.S. recovery. That would result in more imports from the United States, which would help sustain world recovery.

Why might China be willing to go along? Because it may well be in its own interest: China’s growth has been based on an export-led growth model that relies on a high saving rate,

leading to low internal demand, and a low exchange rate, leading to high external demand. The model has been highly successful, but is leading to the accumulation of extremely large reserves, and pressure is building to increase consumption. The high rate of saving reflects the lack of social insurance and the resulting high precautionary saving by households, limited access of households to credit, and governance issues in firms that lead them to retain too high a proportion of their earnings. Providing more social insurance, increasing household access to credit, and improving firms’ governance are all desirable on their own, and would lead to both lower saving

“A decrease in China’s current account surplus would help increase demand and sustain the U.S. recovery. That would result in more U.S. imports, which would help sustain world recovery.”

and higher internal demand. If such an expansion of demand runs into supply-side constraints, this higher internal demand would have to be partly offset by lower external demand, meaning an appreciation of the Chinese renminbi (RMB) at least in real terms. Both higher Chinese import demand and a higher RMB would increase U.S. net exports.

Other emerging market Asian countries also run large current account surpluses. Their motivations vary—some want to accumulate reserves as insurance, others chose an export-led growth strategy that incidentally affects the current account and reserve accumulation. Many of these countries could decrease saving, public or private (as the dramatic decline in household saving in Korea since the 1990s demonstrates), and allow their currency to appreciate. That would lead to a shift from external to internal demand and to a reduction in their current account surplus.

Their incentives, however, are weaker than China’s. Having substantial reserves has proved very useful in the crisis. Swap lines from central banks, and multilateral credit lines—such as the “flexible credit line” created by the IMF during the crisis—could reduce the demand for reserves. But swap lines and credit lines might not be renewed, and so do not offer quite the same degree of safety as reserves. (Establishing arrangements to substantially reduce reserve accumulation would also both be highly desirable in the long run and help to sustain the recovery in the short and the medium run.) Thus, countries that have adopted an export-led growth model may reassess that policy and give more weight to internal demand, but any change is likely to be gradual.

To get a sense of magnitudes, another rough computation is useful. The GDP of emerging Asia is roughly 50 percent of U.S. GDP (with the ratio projected to increase to 70 percent

in 2014). So, if all their trade was with the United States, Asian countries would have to lower their current account position by 4 percent of GDP to improve the U.S. current account by, say, 2 percent of GDP (under the assumption of a 3 percent shortfall in the ratio of consumption to GDP, minus a 1 percent increase coming from lower real interest rates). Since emerging Asia's trade is not all with the United States, the adjustment would likely have to be even larger. This raises the question of whether other countries can and should play a role.

What role for non-Asian countries?

A number of other countries, including some advanced countries, also have current account surpluses. For example, Germany's surplus for 2008 is half China's (although it is shrinking fast); Japan's surplus is one-third of China's.

Should Germany, for example, reduce its surplus? It cannot follow the same route as that suggested for China—that is, a currency appreciation accompanied by a decrease in saving. Because it is part of the euro area, Germany cannot engineer an appreciation on its own. And, on the demand side, it suffers largely from the same problem as the United States: it has limited room on the fiscal side, and it is not clear that it is either desirable or feasible to get German consumers to save less. Germany could, however, improve productivity in its nontradable sector, which would be in its interest. This would, in time, lead to a reallocation of demand toward nontradables and reduce its current account surplus. The same argument applies to Japan. But, because such structural reforms are politically difficult, and because their effects take place slowly, it is likely to be a slow process—too slow to provide substantial support to the recovery over the next few years. So, if rebalancing is to come soon, it probably has to come largely from Asia, through a decrease in saving and an appreciation of Asian currencies vis-à-vis the dollar.

What if rebalancing does not happen?

This tour of the world suggests three conclusions:

- First, the crisis is likely to have led to a decrease in potential output. One should not expect very high growth rates in the recovery.
- Second, sustained recovery in the United States and elsewhere eventually requires rebalancing from public to private spending.
- Third, sustained recovery is likely to require an increase in U.S. net exports and a corresponding decrease in the rest of the world, coming mainly from Asia.

One can question all three conclusions.

On the supply side, the effect on potential output is highly uncertain. After all, despite the pessimistic historical evidence, some countries have emerged from banking crises without experiencing a visible impact on potential output (on the other hand, though, some countries have seen a long-lasting negative impact not only on the level of GDP, but also on its growth rate).

On the demand side, the fiscal space in advanced countries may be larger than expected, allowing the United States to sustain longer-lasting deficits and a higher debt level than

currently forecast without raising market concerns about debt sustainability. If this is the case, rebalancing private and public spending can be phased in more slowly if needed, allowing more time to achieve a rebalancing of world demand. Alternatively, private demand in the United States may be stronger: U.S. consumers could return to their old ways and save less. That would help the recovery and avoid the need for a major adjustment of net exports, although

“If rebalancing is to come soon, it probably has to come largely from Asia, through a decrease in saving and an appreciation of Asian currencies vis-à-vis the dollar.”

it would re-create in the longer run some of the problems that caused the current crisis. Or it could be that the world decouples—that Asia, for example, is able to return to high growth, while recovery in advanced countries falters. But the crisis, and the strong export links that turned a U.S. shock into a world recession, suggests that decoupling, although possible, is unlikely.

If, however, one accepts the argument that both rebalancing acts are likely to be necessary for a sustained recovery, the next question is whether they will take place. It is clear that they may not, at least not on the scale needed. If, for example, Asia is unwilling to reduce its current account surplus and U.S. net exports do not substantially improve, weak U.S. private demand may lead to an anemic U.S. recovery. In that case, there would likely be strong political pressure to extend the fiscal stimulus until private demand has recovered.

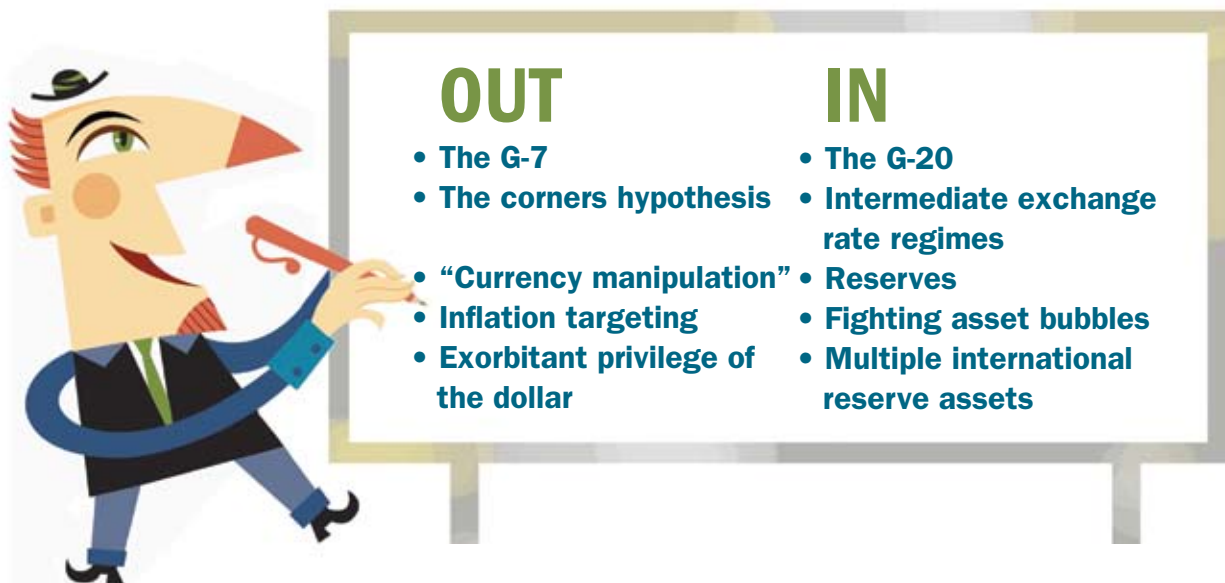
Were that to happen, one can imagine various scenarios: political pressure may be resisted, the fiscal stimulus could be phased out, and the U.S. recovery might falter. Or fiscal deficits might be maintained for too long, leading to issues of debt sustainability and worries about U.S. government bonds and the dollar, and causing large capital flows from the United States. Dollar depreciation may take place, but in a disorderly fashion, leading to another episode of instability and high uncertainty, which could itself derail the recovery.

Sustaining the nascent recovery is likely to require delicate rebalancing acts, both within and across countries. An understanding of the issues and the dangers, and some coordination across countries, is likely to be as crucial during the next few years as it was during the most intense part of the crisis. ■

Olivier Blanchard is Economic Counsellor and Director of the IMF's Research Department.

What's In and Out in Global Money

Things are hot, then they are not, in the world of international money



Jeffrey A. Frankel

IN international monetary economics our exam questions remain the same. Only the answers change, from decade to decade. I nominate five concepts, which were virtually conventional wisdom a short time ago, for my list of what is now “out.” I also nominate five concepts, which might have been described as “out” a few years ago, for my list of what is now “in.”

1 **Out: The G-7**
In: The G-20

Out: The G-7 (Group of Seven) world leaders first met in France in 1975, to ratify the de facto move to floating rates, following the demise of the Bretton Woods world. G-7 finance ministers cooperated to bring down a stratospheric dollar in 1985 and then again to halt the dollar’s depreciation in 1987, in the Plaza and Louvre agreements, respectively. The G-7—Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States—was the most important steering group of the world monetary system. But the membership became increasingly anachronistic. Russia’s addition in 1997, making it the G-8, was much too little, and too late. The exclusion of China and other major developing or emerging market countries rendered the

group out of date. What can finance ministers accomplish by discussing a currency that is not represented at the table?

In: The G-20 adds 12 major economies and the European Union to the G-7—Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Saudi Arabia, South Africa, South Korea, and Turkey. The G-20’s London meeting in April 2009 had some substantive successes and some failures. Regardless, the meeting was a turning point in that the G-20, more than the G-8, is making substantive decisions—finally giving major emerging countries representation.

2 **Out: The corners hypothesis**
In: Intermediate exchange rate regimes

Out: The corners hypothesis postulated that countries are—or should be—moving to one or another corner in their choice of exchange rate regimes: either full flexibility or rigid institutional commitments to fixed exchange rates in the form of currency board, dollarization, or monetary union. According to the hypothesis, anything in between the two extremes was no longer feasible.

The corners hypothesis arose (Eichengreen, 1994) in the context of the European exchange rate mechanism (ERM)

crisis of 1992–93. The ERM had permitted the exchange rates of European currencies to fluctuate within a narrow band. But, under pressure, Italy, the United Kingdom, and others had to devalue or drop out—and only because the band was widened could France stay in. The crisis suggested to many that there was no middle ground between floating and fixing (a judgment seemingly borne out when the leap from wide bands to full monetary union proved successful in 1998–99). After the east Asia crises of 1997–98, the hypothesis was applied to emerging markets too. In efforts to reform the financial architecture to minimize the frequency and severity of future crises, the “fix or float” proposition rapidly became the conventional wisdom (Obstfeld and Rogoff, 1995; Summers, 1999; Meltzer, 2000).

Trouble was, the proposition was never properly demonstrated, either theoretically or empirically. The collapse in 2001 of Argentina’s convertibility plan, which had rigidly linked the peso to the dollar, marked the beginning of the end. Today, it is clear that most countries continue to occupy the vast expanse between floating and rigid institutional pegs, and it is uncommon to hear that intermediate regimes are a bad choice generically.

In: Intermediate exchange rate regimes. If the corners hypothesis is “out,” then intermediate regimes are “in.” Intermediate regimes include target zones (bands), crawls, basket pegs, adjustable pegs, and various combinations of them. The IMF classifies more than half of its members as following regimes somewhere in between free float and hard peg. Economists’ attempts to classify the regimes that countries actually follow (such as Frankel and Wei, 2008), sometimes in contrast to what they claim to follow, generally find an even higher proportion with intermediate regimes.

3 Out: “Currency manipulation” In: Reserves

Out: “Currency manipulation.” In 2007, the IMF was supposedly given responsibility for surveillance over members’ exchange rates, which the United States believed meant telling China that the value of its currency was lower than it should be. The phrase “unfair currency manipulation” has had official status in U.S. law for 20 years and in the IMF Articles of Agreement for longer, despite its protectionist ring. In practice, the supposed injunction on surplus countries to revalue upward has almost never been enforced—in contrast to the pressure on deficit countries to devalue. Some would say it is time to rectify the asymmetry (Goldstein and Lardy, 2009). My view is that it is time to recognize two realities: first, it is normally not possible to identify with confidence the correct value of a currency—still less its “fair” value—and second, creditors are, and will always be, in a stronger position than debtors. It is time to retire the language of unfair currency manipulation.

U.S. legislators have argued that the Chinese renminbi is undervalued and that increased flexibility in China’s currency regime would be beneficial. These are both reasonable propositions. Politicians have overestimated their impor-

tance, however. Continued demands that China stop intervening in the foreign exchange market to keep the renminbi fixed against the dollar could be counterproductive.

In 2007, China moved further in the direction that outsiders had demanded: abandoning the dollar peg and effectively placing a substantial weight on the euro. But in the spring of 2008, China jettisoned the 2007 policy and returned to a dollar target. The reversion evidently was a response to Chinese exporters, who complained they had lost competitiveness in 2007, when the euro appreciated against the dollar. The expectation in 2008 was that the reversal would help Chinese export competitiveness at the expense of the United States. But the euro (surprisingly) depreciated against the dollar in 2008. Had China kept the 2007 policy instead of switching back to the dollar peg, the value of the renminbi would be lower today, not higher. Dollar-based producers would be at a greater competitive disadvantage.

“It is time to retire the language of unfair currency manipulation.”

The fundamental question, however, is longer term. The United States is dependent on China to fund its deficits. Although the U.S. current account deficit is now down by half, domestic debt is still rising alarmingly. If China and other Asian and commodity-exporting countries were to stop buying U.S. treasury bills, the result would be a fall in the value of the dollar together with a sharp increase in U.S. interest rates. U.S. legislators should be careful what they ask for, because they might get it.

In: Reserves. If intervention to dampen appreciation is no longer a sin, then reserves are a new virtue.

The number of floating and managed floating currencies has steadily increased since 1973. For many emerging markets, the increase in exchange rate flexibility was a response to the currency crises of 1994–2001.

In theory, countries that float need not hold reserves, let alone use them. Yet developing and emerging market countries took advantage of the boom of 2003–07 to build up their reserves to unheard heights. Instead of choosing between greater exchange rate flexibility and higher reserves, they chose *both*. Western economists delivered some persuasive-sounding arguments suggesting that many countries were holding far more reserves than they needed (\$2 trillion now, in the case of China). They pointed out that most of these reserves were held in the form of low-yielding U.S. treasury bills (Summers, 2006; and Jeanne, 2007).

Emerging market countries perhaps knew their business better than economists. Foreign exchange reserves have provided self-insurance during the global liquidity crisis. Those countries that built up precautionary reserve holdings were able to avoid large depreciations in the “Panic of 2008” (Obstfeld, Shambaugh, and Taylor, 2009).

4 **Out: Inflation targeting (narrowly defined)** **In: Fighting asset bubbles**

Out: Inflation targeting. The past 10 years have been the decade of inflation targeting (Svensson, 1995; Bernanke and others, 1999). Narrowly defined, inflation targeting commits central banks to annual inflation goals, invariably measured by the consumer price index (CPI), and to being judged on their ability to hit those targets. Flexible inflation targeting allows central banks to aim at both output and inflation, as enshrined in the famous Taylor Rule. The orthodoxy says that central banks should essentially pay no attention to asset prices, the exchange rate, or export prices, except to the extent that they are harbingers of inflation.

I believe that inflation targeting—at least the narrow definition—has already seen its best days.

First, the injunction to pay no attention to the exchange rate is one that perhaps only a dozen committed floaters—if any—can live by. Most countries that say they float don't. Instead, they have a “fear of floating” and feel the need to intervene to moderate fluctuations in the demand for their currencies (Calvo and Reinhart, 2002).

Second, and most important for large advanced economies, is the issue of asset prices. A decade ago, most monetary economists went along with former Federal Reserve Board Chairman Alan Greenspan's doctrine that it is hopeless to try to identify and prick speculative bubbles in stock markets and real estate markets while they are in progress—and that cutting interest rates after they crash is enough to protect the economy. Recent experience has changed minds.

“The policy of coming to the rescue of the markets after the crash created a moral hazard problem that exacerbated the bubbles.”

Third, choosing the CPI as the price index of interest is needlessly destabilizing to the international accounts for countries where trade shocks are important. An alternative price index such as the producer price index or an index of export prices would more appropriately accommodate fluctuations in the terms of trade (Frankel, 2005).

In: Fighting asset bubbles. For 30 years, excessive monetary expansion was believed synonymous with inflation getting out of control, eventually necessitating monetary contraction and, usually, a recession, to return to price stability. This description did fit the recessions of 1974, 1980, 1981–82, and 1990–91. But the 20th century is replete with examples of big asset booms that ended in devastating crashes, where monetary policy, in retrospect, was too easy during the boom phase and *yet where inflation did not show up at any stage*. The

1920s real estate boom in Florida and stock market boom in New York, followed by the 1929 crash and Great Depression; the 1986–89 stock market and real estate bubbles in Japan, followed by its decade of stagnation; the Asia boom and bust in the 1990s; and the U.S. experience of the past decade all fit this pattern well. (Borio, 2005, pointed this out *before* the current financial crisis began in 2007.)

Greenspan's doctrine can be answered with four points. First, identifying bubbles is no harder than identifying inflationary pressures 18 months ahead of time. Second, monetary authorities do have tools to prick speculative bubbles. Third, the policy of coming to the rescue of the markets after the crash created a moral hazard problem that exacerbated the bubbles. Fourth, the cost in terms of lost output can be enormous even when the central bank eases aggressively, as we have recently learned.

5 **Out: Exorbitant privilege of the dollar** **In: Multiple international reserve assets**

Out: Exorbitant privilege of the dollar. Can the U.S. current account deficit be sustained without a major depreciation of the dollar? Will the United States continue to enjoy the unique privilege of being able to borrow virtually unlimited amounts in its own currency? If so, does this privilege warrant the label “exorbitant”—meaning that the benefit traces solely to attributes such as size and history rather than to virtuous behavior such as budget discipline, price stability, and a stable exchange rate? Since 1980, the United States has racked up \$10 trillion in debt. Between January 1973 and May 2009, the dollar depreciated 30 percent against the Federal Reserve's Major Currency Index. It seems unlikely that macroeconomic policy discipline is what has enabled the United States to keep its privilege.

Some argue that the United States maintains the privilege to incur dollar liabilities by exploiting its comparative advantage in supplying high-quality assets to the rest of the world (Caballero, Farhi, and Gourinchas, 2008; Forbes, 2008; Gourinchas and Rey, 2007; Ju and Wei, 2008; and Mendoza, Quadrini, and Rios-Rull, 2007).

Under that interpretation, the fundamental cause of the current account imbalances is a glut of savings in Asia and other countries looking for good investments. That reasoning would seem to be undermined by the low quality of American assets that was suddenly revealed in 2007 and the loss of credibility of U.S. financial institutions in the subsequent crisis.

Although the more exotic arguments about the uniquely high quality of U.S. *private* assets have been tarnished, the basic idea of American exorbitant privilege is still alive: the dollar is the world's reserve currency, by virtue of U.S. size and history. The question then becomes whether the dollar's unique role is eternal, or whether a sufficiently long record of deficits and depreciation could induce investors to turn elsewhere. (See “The Future of Reserve Currencies” in this issue.)

In: Multiple international reserve assets. Does the dollar have credible rivals for the position of sole leading international reserve currency? The two putative challengers of the 1970s and 1980s, the yen and the deutsche mark, had limited heft. The euro, however, is a plausible alternative. There are also some new or revived reserve assets—including the IMF’s Special Drawing Right (SDR). Most likely is a system with several international reserve assets, rather than one that relies overwhelmingly on the dollar.

What determines reserve currency status? Economic size, depth of financial markets, rate of return, and the inertia of history. Euroland is approximately the size of the United States. For the first time, the credibility of U.S. financial markets as limitless, deep, liquid, and trustworthy has been impaired by the crisis. Moreover, the dollar has shown a poor ability to keep its value over time, whether measured by the level or volatility of the exchange rate.

Yes, the current era resembles the Bretton Woods system of the 1960s, with foreign central banks buying up surplus dollars to prevent their own currencies from appreciating. But we are closer to the end than the beginning. Conditions resemble those of 1971, when expansionary U.S. monetary and fiscal policies produced a declining trade balance and overall balance of payments, causing the collapse of the system. There is no reason to expect a different outcome this

time. The United States cannot necessarily rely on support of foreign creditor governments.

Changes in reserve currencies come slowly, but eventually a tipping point is reached. The best precedent is the British

“For the first time, the credibility of U.S. financial markets as limitless, deep, liquid, and trustworthy has been impaired by the crisis.”

pound sterling, which was overtaken by the dollar sometime between 1931 and 1945. Menzie Chinn and I (2008) estimated that a similar tipping point could be reached between the dollar and the euro, with the euro pulling ahead by 2022. This two-currency simulation should not be taken too literally. A more likely successor to the era of unipolar dollar domination is a multiple reserve system.

This year, other international assets have begun to show up in central bank reserve acquisitions as well as the euro. First is the SDR. It was born at the end of the 1960s as a



COLUMBIA | SIPA
School of International and Public Affairs

PROGRAM IN ECONOMIC POLICY MANAGEMENT (PEPM)

Columbia University’s School of International and Public Affairs’ Program in Economic Policy Management offers an intensive 14-month program leading to a Master of Public Administration. The program provides rigorous graduate training in micro- and macroeconomics, management, finance and development policy, with a strong emphasis on the policy issues faced by developing countries. The program concludes with a three-month internship at the World Bank, International Monetary Fund or other public or private sector institutions.

Students may also pursue a focus in International Energy Management and Policy, administered in cooperation with SIPA’s Center for Energy, Marine Transportation and Public Policy, to prepare for work in the businesses, markets and governance structures involved in producing, transporting and marketing energy products.

The program also features a tailored lecture and workshop series, ranging from effective inflation targeting to understanding financial crises.

The program begins annually in early July. Applications are due the preceding January.

epm@columbia.edu | 212-854-6982; 212-854-5935 (fax) | www.sipa.columbia.edu/academics/degree_programs/pepm

To learn more about SIPA, please visit:
www.sipa.columbia.edu

medicine prescribed too late for the rapidly deteriorating Bretton Woods patient. The SDRs issued in the early 1970s established their claim as an international reserve asset, but the quantities were far too small to matter. By the 1990s the unit had all but disappeared from the world monetary system (Eichengreen and Frankel, 1996).

The SDR accomplished a stunning return from the dead at the G-20 meeting in April, when leaders decided not only to triple the size of the IMF but also to issue a new batch for the first time in years. Subsequently China suggested replacing the dollar as international currency with the SDR. Without a major region or country using the SDR as its home currency it does not stand much chance of competing with the euro or the yen, let alone the dollar. Nevertheless, it seems likely that the SDR will now rejoin the list of serious alternative assets in a multiple reserve currency system, especially if the IMF were to adopt “substitution account” proposals to allow members to swap unwanted dollars for SDRs.

Second, after decades when the conventional wisdom considered large holdings of dusty piles of gold bars anachronistic, to be gradually sold off by central banks, the yellow

metal is also back in fashion. It was reported this year that the People’s Bank of China has sharply increased its gold holdings, as an alternative to unlimited dollar acquisition.

Third, the yen has acquired some safe haven status recently.

Then there is the renminbi. Although it would take substantial development and opening of China’s financial markets, the renminbi could become an international currency within a decade and possibly one of the most important in 30 years. But it would be part of a system of multiple reserve currencies—one that would also include the dollar, the euro, the yen, pound, Swiss franc, and SDR, and perhaps even gold as well.

A multiple reserve currency system is inefficient, in the same sense that a barter economy is inefficient. But the existence of competitor currencies gives the rest of the world protection against the leader exploiting its position by running up too much debt and then inflating or depreciating it away. ■

Jeffrey Frankel is Harpel Professor at Harvard University.

References:

- Bernanke, B., T. Laubach, F. Mishkin, and A. Posen, 1999, *Inflation Targeting: Lessons from the International Experience* (Princeton, New Jersey: Princeton University Press).
- Borio, Claudio, 2005, “Monetary and Financial Stability: So Close and Yet So Far?” *National Institute Economic Review*, Vol. 192, No. 1, pp. 84–101.
- Caballero, R., E. Farhi, and P. Gourinchas, 2008, “An Equilibrium Model of ‘Global Imbalances’ and Low Interest Rates,” *American Economic Review*, Vol. 98, No. 1, pp. 358–93.
- Calvo, Guillermo, and Carmen Reinhart, 2002, “Fear of Floating,” *Quarterly Journal of Economics*, Vol. 117, No. 2, pp. 379–408.
- Chinn, Menzie, 2005, “Getting Serious About the Twin Deficits,” *Council Special Report No. 10* (New York: Council on Foreign Relations).
- , and Jeffrey Frankel, 2008, “Why the Euro Will Rival the Dollar,” *International Finance*, Vol. 11, No. 1, pp. 49–73.
- Eichengreen, Barry, 1994, *International Monetary Arrangements for the 21st Century* (Washington: Brookings Institution).
- , and Jeffrey Frankel, 1996, “The SDR, Reserve Currencies, and the Future of the International Monetary System,” in *The Future of the SDR in Light of Changes in the International Financial System*, ed. by M. Mussa, J. Boughton, and P. Isard (Washington: International Monetary Fund).
- Forbes, Kristin, 2008, “Why Do Foreigners Invest in the United States?” *NBER Working Paper 13908* (Cambridge, Massachusetts: National Bureau for Economic Research).
- Frankel, Jeffrey, 2005, “Peg the Export Price Index: A Proposed Monetary Regime for Small Countries,” *Journal of Policy Modeling*, Vol. 27, No. 4, pp. 495–508.
- , and Shang-Jin Wei, 2008, “Estimation of De Facto Exchange Rate Regimes: Synthesis of The Techniques for Inferring Flexibility and Basket Weights,” *IMF Staff Papers*, Vol. 55, pp. 384–416.
- Goldstein, Morris, and Nicholas Lardy, 2009, *The Future of China’s Exchange Rate Policy* (Washington: Peterson Institute for International Economics).
- Gourinchas, Pierre-Olivier, and Hélène Rey, 2007, “From World Banker to World Venture Capitalist: U.S. External Adjustment and the Exorbitant Privilege,” in *G7 Current Account Imbalances*, ed. by R. Clarida, (Chicago: University of Chicago Press), pp. 11–66.
- Jeanne, Olivier, 2007, “International Reserves in Emerging Market Countries: Too Much of a Good Thing?” *Brookings Papers on Economic Activity*: 1, *Brookings Institution*, pp. 1–55.
- Ju, Jiandong, and Shang-Jin Wei, 2008, “When Is Quality of Financial System a Source of Comparative Advantage?” *NBER Working Paper 13984* (Cambridge, Massachusetts: National Bureau for Economic Research).
- Meltzer, Allan, 2000, *Report of the International Financial Institution Advisory Commission*, Submitted to the U.S. Congress, March.
- Mendoza, E., V. Quadrini, and J. Rios-Rull, 2007, “Financial Integration, Financial Deepness and Global Imbalances,” *NBER Working Paper 12909* (Cambridge, Massachusetts: National Bureau for Economic Research).
- Obstfeld, Maurice, and Kenneth Rogoff, 1995, “The Mirage of Fixed Exchange Rates,” *Journal of Economic Perspectives*, Vol. 9, No. 4, pp. 73–96.
- Obstfeld, M., J. Shambaugh, and A. Taylor, 2009, “Financial Instability, Reserves, and Central Bank Swap Lines in the Panic of 2008,” *American Economic Review*, Vol. 99, No. 2, pp. 480–86.
- Summers, Lawrence, 1999, *Testimony before the Senate Foreign Relations Subcommittee on International Economic Policy and Export/Trade Promotion*, January.
- , 2006, “Reflections on Global Account Imbalances and Emerging Markets Reserve Accumulation,” *L.K. Jha Memorial Lecture, Reserve Bank of India*, March 24.
- Svensson, Lars, 1995, “The Swedish Experience of an Inflation Target,” in *Inflation Targets*, ed. by L. Liederman and L. Svensson (London: Centre for Economic Policy Research).

Rebuilding the Financial

What needs to be done to strengthen financial regulation and supervision?

Andrew Crockett

WITH the most dangerous phase of the financial crisis that began in 2007 seemingly past, attention is turning to strengthening the financial system. Policymakers are focusing on how to correct the shortcomings in the financial architecture that contributed to the outbreak of the crisis.

The crisis itself was caused by many factors, the relative importance of which will be debated for years. But whatever the underlying causes, public opinion rightly expects the regulatory environment to be reformed to prevent a repetition of the economic and human costs of the crisis.

There is a natural desire in such circumstances for “more regulation.” What is needed, however, is “better regulation,” a regime that can more readily identify emerging vulnerabilities, that can properly price risks, and that strengthens incentives for prudent behavior. In some cases, this will require additional regulation; in others, a better-targeted use of powers that regulators already have. When implementing reforms, it will be important to pursue the objective of a financial system that is not only stable, but also efficient and innovative.

It is convenient to divide the reforms into those that affect the institutional *coverage* of regulation, those that change the substantive *content* of supervisory rules, and those that modify the *structure* of regulatory oversight bodies.

Widening the net

Traditionally, regulation has covered the three pillars of the financial system—banking, insurance, and securities markets. For a long time, it was easy to identify which institutions fell into which category and, together, the three pillars essentially covered the gamut of financial intermediation. In recent years, however, a much wider range of institutions have come to play important roles in the functioning of the financial system.

This has been particularly significant in connection with the emergence of the “originate-to-distribute” model of credit intermediation. More and more credit is intermediated through the capital markets. This has two advantages: it allows borrowers to tap deeper sources of liquidity and, in principle, it distributes risk to entities best able and willing to hold it. But the model requires a demanding set of preconditions for it to work efficiently and safely.

The originators of credit need incentives to appraise credit risks properly. The creators and distributors of securitized credit products have to provide adequate transparency. And the holders of securities need to understand the properties of the assets that they acquire. This means that a greater number of players are central to the secure working of the financial system.

Private pools of capital, such as hedge funds and private equity funds, have grown enormously. Money market mutual funds have come to raise and place increasing amounts of short-term funds. Investment banks have greatly expanded their trading activities. Mortgage originators are at the center of the creation of the assets that underlie the mortgage-backed securities markets.

In addition, service providers, such as clearing and settlement systems, credit-rating agencies, and auditing firms, play an increasingly important role in the efficient and secure distribution of credit. For these reasons, it will be necessary for the new architecture to provide adequate oversight of a much wider range of players than has been traditional.

Resetting regulation

Almost every financial crisis has at its core the twin problems of credit quality and excessive leverage. The factors contributing to these problems differ from episode to episode, but the prevalence of the two underlying causes cannot be disputed.

Durable reform of the regulatory architecture therefore requires supervisory techniques that counteract the tendencies to misprice credit risk and to take on excessive leverage. The mispricing of credit risk is part of what has recently become well known as the procyclicality of the financial system. In good times, risk sensitivity becomes dulled, measured risk appears to be reduced, and risk mitigators (such as collateral) are accorded greater value than they often merit. So lenders extend credit to borrowers on terms that do not reflect the risks that emerge when the cycle turns. Conversely, in bad times, excessive caution prevails, risk measures are adversely affected by recent loss experience, and collateral values plummet. The willingness to lend goes sharply into reverse.

In any reform of the system, it will be important to better reflect “through-the-cycle” risks and to limit the tendency toward procyclicality. The Basel Committee on Banking Supervision is discussing various ways in which this can be done. Most of them involve mechanisms to encourage banks to build up additional capital cushions during periods of benign credit conditions, so that when the cycle turns, this capital is available to absorb losses without forcing banks into a destructive downward spiral of credit contraction.

Excessive leverage is also part and parcel of procyclicality. Leverage and maturity transformation—such as taking short-term deposits and using them to make longer-term loans—is a major source of the value added by a financial system, but it depends on the maintenance of careful risk management and the holding of adequate capital. Reforms will have to place

Architecture

additional weight on the prudent funding of banks' asset portfolios.

Higher levels of capital will clearly be needed in the financial system, particularly to cover the risks of trading activities. But it will be important not to use capital requirements on banks as an undifferentiated response to systemic risks. Indeed, beyond a certain point, higher capital requirements, by raising costs, can drive intermediation into less-regulated channels, where risks may turn out to be greater. Capital augmentation has to be matched with a focus on better risk management. In particular, there needs to be an enhanced focus on the management of liquidity risks, perhaps supported by quantitative rules covering maturity transformation.

Reorganizing the regulators

In recent years, the traditional model of regulation, in which separate bodies oversaw banks, insurance companies, and securities markets, was challenged by the emergence of integrated regulators—in Japan, Germany, and the United Kingdom, among others—and by the Australian and Dutch “twin peaks” model, which separated prudential supervision from conduct of business and consumer protection regulation. The current crisis, however, calls for a more fundamental reevaluation of the structure of regulatory responsibilities. Where supervisory responsibilities are divided, there will have to be stronger mechanisms for cooperation among different regulators and, where the central bank is not the regulator, with the monetary authority.

In addition, the global nature of the financial industry and of the current crisis underscores the importance not just of national regulatory structures, but also of adequate coordinating mechanisms at the global level.

Attempting to secure systemic stability solely by ensuring the prudent operation of individual financial institutions is increasingly recognized as inadequate. Microprudential supervision can fail to identify risks that emerge at the macroprudential level. These risks can emerge when a shock simultaneously affects all financial institutions and/or when responses to shocks generate inherently destabilizing market dynamics.

The most obvious example occurs when an institution, following a negative shock to its portfolios, attempts to withdraw from risk by liquidating assets. Asset sales drive down prices, leading to losses for other institutions, which in turn seek to protect themselves by liquidating assets. A spiral of asset price declines and portfolio liquidation is thereby set in train.

Many countries are considering creating a systemic risk regulator, which would have responsibility for the stability of

the financial system as a whole. Such a systemic risk regulator would be expected to identify gaps in regulatory structures and to spot emerging vulnerabilities in financial trends. There is considerable debate about which agency should be the systemic risk regulator. One view is that the central bank should take this responsibility, given its traditional concern for financial stability, its direct involvement in markets, and its capacity, through its balance sheet, to act as lender of last resort in a crisis.

An alternative view is that giving the central bank such a responsibility would confer too much power on a single institution, which would risk a greater degree of politicization. Moreover, to make the central bank the systemic regulator could sacrifice some of the insights coming from other regulators. The responsibility for systemic oversight could therefore be placed with a council of regulators, perhaps with its own independent staff charged with assessment of systemic risks. Intermediate solutions are also possible.

An important aspect of the regulatory structure is the design of international coordination. Finance is increasingly international, with global markets and large cross-border financial institutions. It is desirable for financial intermediation to be subject to consistent, high-quality regulation in all major jurisdictions. This would increase security, reduce opportunities for regulatory arbitrage, avoid costly and duplicative supervision, and promote a level competitive playing field.

The easiest way to achieve this would be to have a single global financial authority, but this is not a realistic option for the foreseeable future. Regulatory responsibilities are a matter of national sovereignty, and anyway national governments must make the costly decisions when one of their private institutions faces difficulties. So, in practice, coordination of regulation will have to be achieved through international bodies relying on understandings and peer pressure. It would be desirable, nevertheless, to give more authority to such institutions and groupings to implement their recommendations.

The key bodies are the IMF, the Bank for International Settlements, the Financial Stability Board, and the various sectoral standard setters (the Basel Committee on Banking Supervision, the International Organization of Securities Commissions, the International Association of Insurance Supervisors, and the International Accounting Standards Board). To the extent these bodies can receive support from appropriately representative groups (such as the leaders of the G-20 nations), their recommendations and decisions will carry greater weight.

Getting it right

Much can be done to place financial regulation and supervision on a sounder footing, to enhance the stability of the system while preserving its vital contribution to the efficient working of the wider economy. The debate under way seems to be asking the right questions and going in the right direction. Still, it will be important to subject proposed outcomes to rigorous scrutiny, to avoid fighting the last war or falling victim to the law of unintended consequences. ■

Andrew Crockett is President of JPMorgan Chase International.



Looking Ahead

Carlo Cottarelli and José Viñals

Countries must begin now to devise economic strategies to accompany recovery

THE global economy is showing signs of improvement—there is light at the end of the tunnel—but prospects remain highly uncertain. So while it is too early to exit from crisis-response policies, it is vital to begin defining a strategy to accompany recovery. Failure to do so would destabilize expectations and weaken the effect of the fiscal and monetary support now being provided.

Fiscal authorities and central banks have fought the global economic downturn by replacing sagging demand from consumers and businesses and by providing substantial support for the financial and other key sectors. As a result, their balance sheets have grown—and have grown riskier.

Not only did the crisis-related policies weaken public balance sheets, the surge in public debt took place while health and pension spending were increasing because of aging populations—especially in advanced economies. The ongoing debt surge has overwhelmed more than a decade of efforts in many countries to strengthen public budgets

in anticipation of an aging population. An easing of the monetary policy stance and the use of unconventional central bank policy measures may have been essential to preventing the collapse of the financial sector, but the substantial acquisition of impaired assets has exposed a number of central banks to potential losses, and the quasi-fiscal nature of some of these policy actions may lead to political pressures on central bank independence.

What does this mean for policies to accompany recovery? First, the fiscal problems that stem from population aging must be attacked with greater vigor. Second, the capacity of central banks to control inflation must be preserved and even enhanced. Third, policies will have to foster strong and sustainable economic growth by restoring private sector control of the financial and other sectors to allow competition and the improvement in productivity this will bring.

Fiscal problems are unprecedented

Three factors are contributing to a major weakening in the state of the public finances:

- the plunge in economic activity and the slowdown in economic growth in the next few years compared to pre-crisis projections;
- fiscal stimulus packages; and
- government intervention operations in support of the financial sector.

The ratio of debt to gross domestic product (GDP) is expected to rise to 115 percent in the advanced economies in 2014, based on the July WEO Update projections, from 75 percent in 2007. Debt ratios will be close to, or exceed, 90 percent by 2014 in all G-7 economies except Canada (that is, France, Germany, Italy, Japan, the United Kingdom, and the United States).

This surge in public debt is unprecedented during peacetime. Major increases occurred in the 1930s, but started from lower levels (for example, about 20 percent of GDP in the United States in 1929). Moreover, demographic trends were favorable in the 1930s.

Only a relatively small portion of the debt surge in advanced economies—6 percent so far—is due to financial support operations. The bulk of the debt increase stems from fiscal stimulus and, especially, tax revenue losses associated with the recession and the collapse in asset prices. Thus, the fiscal problem cannot be solved simply by unwinding financial support operations.

Fiscal risks

Failure to address the trend of rising debt could lead to concerns that the debt will ultimately be “inflated away” or that default is inevitable. Interest rates would then rise, making the fiscal problem worse and potentially killing the recovery; debt maturities would shorten; and refinancing crises could occur. These concerns would be especially severe where perceived risks of currency depreciation are high.

Consensus forecasts and market indicators of expectations derived from inflation-indexed bonds in major advanced countries suggest that inflation is expected to remain low over the next decade. And, while interest rates on government paper have been on the rise for some months, they also remain low. Markets, however, often react late and suddenly, so the benign market response to date does not provide firm reassurance for the future.

Some commentators have suggested that inflation—which could occur if central banks are unable to shrink their balance sheets and tighten monetary policy fast enough when the recovery begins—could play a helpful role in reducing the debt burden. However, high inflation gives rise to sizable distortions of its own and may be costly to bring down again. And inflation in the single digits would not make much of a dent in the real value of the debt, especially if higher inflation expectations are reflected in higher interest rates when governments refinance themselves in the years ahead. In short, price stability, in the form of low inflation, is a critical public good. It is important to preserve it to support sustained economic growth.

Central banks acted decisively

Decisive central bank action to provide liquidity and other financial support helped to prevent financial sector collapse

and damaging deflation. Central banks substantially lowered policy rates. In their liquidity provision operations, they lengthened maturities and widened the range of collateral and the group of counterparties to ensure a smooth flow of reserve money into the system.

“Policies will have to foster strong and sustainable economic growth by restoring private sector control of the financial and other sectors to allow competition.”

Central banks also engaged in various asset-driven and often unconventional operations, both to deal with short-term interest rates that were close to zero in some cases and to combat severe market disruptions, especially when bank demand for reserve balances rose sharply following the Lehman Brothers collapse in September 2008. Notably, unconventional instruments have involved quantitative and credit easing. *Quantitative easing* in this crisis has consisted of purchases of government securities to reduce longer-term interest rates, while *credit easing* has involved purchases of private sector assets to counter the widening of credit spreads in specific markets (becoming the buyer of last resort in a moribund commercial paper market, for example). In some countries, the combined impact of quantitative and credit easing on central bank balance sheets has been very large. For example, by end-June 2009, the balance sheet of the U.S. Federal Reserve more than doubled and that of the Bank of England nearly tripled from the onset of the crisis two years earlier, in both cases to some 15 percent of GDP. The Eurosystem balance sheet expanded by some 50 percent to reach 20 percent of GDP.

Monetary policy faces unusual issues

Central banks may face tensions between the risks of rising inflationary pressures—whether from domestic demand, commodity prices, or a feed-through from exchange rate movements—and financial stability concerns during continued weak economic performance.

The extensive use of unconventional instruments has complicated both the setting of policy and communication of that policy. Normally, a single instrument—the short-term interest rate, usually an interbank rate—is used to signal a change in a central bank’s policy stance. But the unconventional operations central banks have employed make it considerably more difficult to assess the overall stance of monetary policy. This difficulty might persist in the early stages of recovery if inflationary pressures reemerge in some countries before markets have been fully restored, so that some use of unconventional instruments could continue even as interest rates rise.

So central banks could face important challenges in several related areas: determining the timing and extent of reversing

policy easing; deciding what their future balance sheet should look like; coordinating with fiscal authorities and other central banks; and communicating strategy to the public. Beyond this, although price stability should remain the primary goal of monetary policy, there is a vital debate about the proper role of the central bank in ensuring financial stability.

Returning to normalcy

As economies recover, it will be important to return to normalcy—not only in government debt and central bank balance sheet positions but in institutional responsibilities as well. To reduce the likelihood of a future crisis, fiscal adjustment—including pension and health care reforms—must take place as soon as the recovery is safely under way. Unwinding the central bank's interventions, while compensating for any related losses in the government's budget, will preserve the ability of the central bank to keep inflation under control.

Greater fiscal discipline needed

The magnitude of fiscal adjustment needed in the next couple of decades is almost unprecedented, especially for countries with the highest debt. A study by the IMF's Fiscal Affairs Department suggests that advanced countries with higher debt (over 60 percent of GDP in 2014) would have to maintain an average primary surplus (revenue less expenditure before interest payments) of 4½ percent beginning in 2014 to reduce the debt to 60 percent of GDP by 2030 (Horton, Kumar, and Mauro, 2009).

Fiscal adjustment will require reform of pension and health entitlements—the key source of spending pressures over the coming decades. The net present value of future spending due to aging is more than 10 times as large as the fiscal cost of the crisis. Policy measures in this area are politically difficult and will require further technical groundwork, but are necessary. Measures such as raising the retirement age can make a sizable dent in the net present value of future public spending without undermining the effects of the fiscal stimulus on aggregate demand.

Still, fiscal adjustment will have to extend beyond pensions and health care, to revenues and expenditures more generally. Differences in circumstances and policy preferences will lead to different choices across countries, but there will be a few common themes. On the *spending side*, fiscal stimulus measures must not become permanent. On the *revenue side*, broadening the tax base will be the first step, but changes to the tax structure are likely to become more important than before. In this regard, externality-correcting taxes (such as carbon taxation) would be among the main priorities. To buttress the fiscal adjustment, institutional arrangements such as medium-term fiscal frameworks, fiscal responsibility laws, fiscal rules, and fiscal councils may play a helpful role, depending on country circumstances.

Policies should also ensure adequate recovery of the value of assets acquired during the crisis. Country authorities may occasionally face trade-offs between rapidly selling assets to the private sector as soon as acquired banks or companies return to profitability and a more gradual approach that might ultimately yield larger gains to the government's budget.

Economic growth should be a top priority, given its power to improve a country's debt position. A 1 percentage point increase in economic growth for 10 years (holding spending constant and assuming a 40 percent tax rate) lowers

“The ability of central banks to preserve price stability will be critical to the strong economic growth that is desirable in itself and is also needed to ensure debt sustainability.”

public debt by 24 percentage points of GDP. And if growth over the coming decade averages the same as over the past two decades, balanced budgets—while a challenging objective—would be sufficient to cut a country's debt ratio from 100 percent of GDP to 60 percent. However, economic growth over the next decade or so is by no means guaranteed. The crisis could result in lower potential growth than in past decades and adverse demographic developments may also constrain growth. Thus, reforms to enhance potential growth are essential.

On the plus side, the basic arithmetic of debt dynamics means that, regardless of where it starts, the debt-to-GDP ratio converges to a level that depends only on growth and the deficit-to-GDP ratio. So efforts to boost growth and to contain the deficit can pay off even if debt positions are high now.

Challenges to monetary policy

The ability of central banks to preserve price stability will be critical to the strong economic growth that is desirable in itself and is also needed to ensure debt sustainability. While deflation would have pernicious effects and exacerbate the recession, inflation rates higher than those consistent with price stability could also harm economic growth.

Stabilizing the financial sector and the real economy are critical in the short term. But as the crisis abates, the ability of central banks to maintain price stability could be compromised by expanded balance sheets that contain impaired assets:

- Large excess reserves might result in rapid credit growth and inflationary pressures.
- Certain assets could be hard to use for monetary policy and liquidity management.
- A reliance on quantitative tools would make it difficult to judge the stance of monetary policy.
- Losses and quasi-fiscal operations can lead to political pressures that undermine central bank independence.

Elements of a strategy

The key elements of a central bank exit strategy are, in order of priority: limiting and unwinding unconventional operations; restructuring balance sheets; preparing instruments for

monetary tightening; and defining and communicating policies to anchor expectations.

Unconventional operations. Some unconventional operations—justified only by the crisis—will be unwound as financial conditions normalize, and demand for excess reserve balances will automatically fall. Other balance sheet positions will require more active management and policy.

Purchases of government securities under quantitative easing were made to reduce long-term interest rates. Outright sales could increase government borrowing costs, so the timing of these sales is crucial. While government securities could be used in open market operations to drain excess liquidity, there is no pressing need to sell, because holding long-term securities is normal for many central banks.

Credit-easing programs (buying private sector assets to counteract credit spreads) are mostly time limited. As with quantitative easing, a running down of substantial credit-easing operations may imply an effective tightening of monetary policy. Here again, the timing needs to reflect an overall assessment of economic conditions.

The most difficult issues arising from credit easing will be related to holdings by the central bank of often illiquid private sector securities whose value is uncertain. These assets may not be usable in normal open market operations and may thus create a drag on efforts to drain liquidity when inflationary pressures reemerge. Moreover, these assets could be a prime source of central bank losses.

Restructuring balance sheets. The large unconventional asset positions now held by some central banks give rise to both market and credit risk. The associated losses on these positions may result in a negative net capital position for some central banks. Credit risk—whether taken on through credit easing or riskier collateral—may materialize. Market risk, mainly from longer-term assets purchased at low yields, could cause assets to lose value when interest rates rise.

The appropriate response for each central bank will depend on the structure of its balance sheet. If capital is still positive and operations show an overall profit, then over time the balance sheet should strengthen. But if credit losses are large, the government will have to transfer funds to the central bank to recapitalize it. A financially weak central bank would otherwise be more subject to political pressures, and more reluctant to take necessary actions, with serious repercussions for price stability.

Preparing to tighten monetary policy. Central banks must regain control of liquidity and reestablish the short-term policy rate as the key tool for setting the monetary policy stance, so that they are prepared to tighten when the time comes.

As the economy emerges from the crisis, banks may still be holding substantial excess liquidity, which must be reabsorbed to keep credit growth and inflation in check. Central banks can use many instruments and measures to this end, including reverse repos (selling government securities on their books that they agree to buy back later), issuing central bank bills, and raising remuneration on bank reserves held at the central bank.

Increasing the remuneration for reserves will be important, but reliance on this type of standing deposit facility risks weakening incentives for interbank trading. Because central

banks generally use an interbank lending rate as the policy rate, a smaller interbank market would affect the transmission of interest rate changes to the wider economy, and this must be taken into account in setting monetary policy.

Central banks that have engaged substantially in credit easing may hold long-term assets that cannot be used in open market operations, and will have to use term deposits or central bank bills to reabsorb liquidity.

Finally, tightening collateral policy may be important for some central banks, to reduce the risk of future losses and avoid market distortions. This will require careful planning to avoid sudden shocks to the market.

Communication

It is still too soon to tighten fiscal and monetary policy, but not too early for governments to anchor expectations by defining and communicating their strategies and proposed measures to ensure fiscal solvency. Markets must be reassured that longer-term concerns will be addressed, and that fiscal policy will be tightened when the economy recovers. Moreover, some actions that have no risk of a negative impact on aggregate demand could be implemented now, such as institutional reforms to enhance fiscal transparency and medium-term fiscal frameworks (for example, credible commitments to cut the fiscal deficit in the medium term).

Markets will also react positively to monetary policy actions that reassure them of the commitment to keeping inflation in check. At the start of the crisis, markets were at times confused about the monetary policy stance, which was sometimes obscured by the extraordinary measures being used to ensure financial stability or to ease liquidity conditions. Avoiding such confusion in the exit will require clear communication by central banks. Drawing a distinction between the policy stance and the measures taken to implement it will be key. The use of a common terminology by central banks would assist the process.

International coordination key to successful exit

International cooperation is necessary to ensure consistency across countries' fiscal and monetary policy during the exit process, building on and extending the experience during the crisis thus far. The almost simultaneous onset of the crisis in advanced economies helped facilitate coordination of the introduction of the unprecedented policy measures. However, recoveries may be less synchronized. As a result, ensuring international consistency of macroeconomic policies may be more difficult, with country-specific circumstances playing a greater role in governments' deliberations regarding their policy stances. ■

Carlo Cottarelli is Director of the IMF's Fiscal Affairs Department and José Viñals is Financial Counsellor and Director of the Monetary and Capital Markets Department.

Reference:

Horton, Mark, Manmohan Kumar, and Paolo Mauro, 2009, "The State of Public Finances: A Cross-Country Fiscal Monitor," IMF Staff Position Note 09/21 (Washington: International Monetary Fund).



Growth after the Crisis

Francesco Giavazzi

If the world economy is to recover, a replacement must be found for the newly frugal U.S. consumer

Photo shows a deserted shopping mall near Washington, D.C., on a Friday afternoon.

U.S. consumers, for decades the driver of the world economy, appear to have retrenched for the long haul.

To get a sense of magnitudes: U.S. private consumption was about \$10 trillion in 2008 and European Union consumption accounted for about \$9 trillion. Asian consumption was less than \$5 trillion. Before the crisis, U.S. private consumption accounted for about 16 percent of global output. It is not surprising that the economizing by U.S. consumers has pushed the world economy into a deep recession. Nor it is surprising that demand expansion in emerging countries—such as China, India, and Brazil—though on the rise, cannot compensate for the fall in U.S. buying.

Christopher D. Carroll, a Johns Hopkins University economist who has studied the behavior of U.S. consumers for more than a decade, predicts that U.S. households, spooked by the recession, will increase savings to about 4 percent of disposable income—that is, income after taxes. That's

the level at which U.S. households saved in the mid-1990s, before they went on a spending spree that reduced savings to almost zero in the years before the crisis. Disposable income is about 70 percent of gross domestic product (GDP), so a 4 percent increase in the household savings rate would translate into a fall in household consumption of about 3 percent of GDP.

To compensate for declining consumer spending and reduced business investment, many governments have boosted public spending and cut taxes, increasing government deficits in the process. But government stimulus is a short-term prop. Deficits are unsustainable in the long run. Prosperity will eventually require the recovery of consumer and business spending. In fact, even though private demand has yet to recover, policymakers are contemplating how and when to begin to reduce or remove their stimulus packages and shift fiscal balances back toward equilibrium without pushing the world anew into recession (see “Sustaining a Global Recovery” in this issue).

How will the world replace a reduction in global demand as large as 3 percent of U.S. GDP when governments begin their inevitable fiscal consolidation? That is the major issue confronting policymakers and economists.

Many observers think that the answer, in the medium term, is an increase in domestic demand in China. But that seems unlikely. For some time at least, China will be unable to replace a loss of demand as large as 3 percent of U.S. GDP. The Chinese economy is one-third that of the United States. So to replace the decline in U.S. demand, China's spending would have to increase by about 10 percent of GDP. This is possible, but would require major reforms. China today saves some 40 percent of its GDP—half by households, the other half by firms.

China savings

The factors that underlie that enormous savings rate are unlikely to change quickly. Chinese firms save that much because the banking system still favors state-owned enterprises and lacks the culture of financing a promising private-sector project. Household savings are mainly precautionary because the country lacks a public safety net and has few risk-sharing financial products, such as health insurance, life insurance, and pensions. While Chinese authorities have been aware of these problems for many years, reforms have been slow. Since the start of the crisis, the Chinese government has used public spending—mostly in new infrastructure—to offset the fall in export demand. But some signs suggest that the productivity of additional infrastructure spending is decreasing. What China needs is unemployment insurance, public pensions, health insurance, public schools, and a new banking culture. Until those materialize, the private saving rate will remain enormous and private spending, correspondingly depressed.

China doesn't have to make up for the entire decline in U.S. consumption. Demand could also expand in countries such as India and Brazil, but, given the size of these economies, it is unlikely that they will be able to compensate fully for the fall in U.S. consumption. Of course Europe could step in, but Germany, at the core of the European Union, has traditionally been an export-led economy, unable to grow from internal demand, let alone provide a demand stimulus to the rest of the world.

Is there a way out of this deadlock? Maybe U.S. consumer demand does not have to be replaced entirely and immediately by consumer demand in other countries to restore full employment in the world. Consider the problem from a different perspective—based on the underlying concepts of the growth model for which Robert Solow won a Nobel Prize in 1987. For the world economy to be in full employment, savings must equal investment. If the world saving rate increases (and it will if the increase in the saving rate of U.S. consumers is not offset by large enough reductions in the saving rate in other countries), the only way to maintain full employment is through higher investment.

This has, in part, already happened through the increases in public investment that were part of the stimulus packages in many countries. But relying on higher public investment for the longer term has two problems:

- To restore goods market equilibrium in the world, public investment—for instance, in the United States—would have to

double, from less than 3 percent to almost 6 percent of GDP. It is unclear whether such a large increase in public investment would be feasible: in the gigantic American Recovery and Reinvestment Act of 2009, the increase in U.S. public investment amounts to less than 1 percent of GDP a year.

- Any increase in public investment carries with it the high probability that some of it will be wasted rather than contributing to raising the productive level of the capital stock—as I noted, some of this seems to be happening in China now.

Private investment, which accounts for a much larger fraction of GDP (close to 20 percent in the United States), is a more likely candidate to plug the spending gap than is public investment. But what would induce firms to raise investment spending in the middle of a sharp recession? A technological breakthrough—such as the internet revolution that began in the mid-1990s—does not seem to be on the horizon.

What could give rise to a new round of private investment is the realization that the crisis will change the composition of world demand for the long term. To address such a change, the structure of world output would have to adjust, which requires industrial restructuring and, as a consequence, new investment.

Demand composition shifts

If U.S. consumption will be permanently lower, and consumption in the emerging and developing markets eventually higher, then the composition of world demand will change because the composition of a country's consumption depends on its per capita income. This means that the type of goods demanded will change. We already see something like this coming: primary commodity producers (in Latin America, in particular) are benefiting from the demand shifts toward China and India. Although demand for, and prices of, primary commodities declined during the recession, they have begun to climb again. It is demand for high-end German cars that has virtually disappeared. Adjusting the structure of world production to such a change in the composition of world consumption cannot happen without substantial restructuring, and, therefore, substantial investment.

Thus a permanent increase in the U.S. saving rate could be offset, at least in part, by an increase in private investment. What would prompt firms to invest is the anticipation of a change in both the geographic allocation and the composition of consumption—relatively more consumption in China, relatively less in the United States; higher demand for such things as basic appliances and relatively lower demand for high-end automobiles.

This observation has an interesting corollary. Those countries that invest in restructuring today will emerge from the transition with a higher (per capita) capital stock and, therefore, a higher per capita income. Those countries that do the restructuring—and get it right, including the portion that happens through public investment—will come out of the crisis richer. ■

Francesco Giavazzi is Professor of Economics at Bocconi University, and a regular visiting professor at the Massachusetts Institute of Technology.

The **Future** of Reserve Currencies

Benjamin J. Cohen

For nearly a century, the U.S. dollar has reigned supreme, but are those days over?

THE global economic crisis has again raised the question of the future of reserve currencies. For nearly a century, the U.S. dollar has reigned supreme as the world's top international money. In recent decades, however, confidence in the greenback has been undermined by the United States' persistent current account deficits and growing foreign debt. Increasingly, observers have predicted an end to the dollar's dominance. For many, the dollar's fate seemed sealed following the collapse of the U.S. housing market in mid-2007, which triggered the greatest upheaval in U.S. financial markets since the Great Depression.

As it turned out, the crisis proved to be anything but fatal for the dollar. Not even the troubles of the U.S. financial sector, which required massive government interventions, sufficed to tip preferences decisively. Instead, ironically, the crisis temporarily reinforced the greenback's global standing, as investors fled to the dollar for safety. Late last year, global demand for U.S. treasury bills was so intense that yields fell to zero or below. Nonetheless, the dollar's future continues to be hotly debated (Helleiner and Kirshner, 2009). Over the longer term, it is widely held, the decline of the greenback will undoubtedly resume, ending the currency's reign once and for all.

But that begs a critical question: What would replace the dollar? Some say it will be the euro; others, perhaps the Japanese yen or China's renminbi. And some call for a new world reserve currency, possibly based on the IMF's Special Drawing Right or SDR, a reserve asset. None of these candidates, however, is without flaws. In fact there is no obvious alternative to the dollar lurking in the wings, just waiting to take center stage. To paraphrase Winston Churchill's famous remark about democracy, the dollar may turn out to be the worst choice—except for all the others.

The most probable outcome is apt to be more ambiguous—more like the interregnum between the two World Wars, when

Britain's pound sterling was in decline and the dollar on the rise but neither was dominant. Coming years, I submit, will see the emergence of something similar, with several monies in contention and none as clearly in the lead as in the recent past. The economic and political impacts of a more fragmented currency system could be considerable.

When economics and politics intersect

In the absence of a world currency backed by an effective global government, foreign trade and investment must rely on acceptable national currencies to play international roles. A disconnect therefore exists between the jurisdictions that are the source of international monies and the domains of the markets in which they operate, which introduces a political dimension that is often overlooked in purely economic analyses.

The conventional framework for the study of international currencies separates out the three standard functions of money—medium of exchange, unit of account, and store of value—at two levels of analysis: the private market and government policy. In markets, an international currency plays a role in foreign exchange trading, trade invoicing, and financial investments. For governments, the functions of international money are as an exchange rate anchor and as a reserve currency. At the market level, economic considerations typically dominate in determining preferences. At the government level, the additional ingredient of politics is unavoidable.

Politics enters because an international currency offers unique advantages for the nation that issues it—political as well as economic. Economists naturally tend to focus on the economic benefits involved, such as international seigniorage—the gain of real resources that results when a country's currency is acquired and held abroad. Economic benefits also include the increased flexibility of macroeconomic policy that is afforded by the ability to finance deficits in one's own currency—what



Charles de Gaulle had in mind back in the 1960s when he complained about America's "exorbitant privilege." But there are political benefits as well. The government of a country with an international currency is given more room to pursue diplomatic or military initiatives outside its borders, a manifestation of what political scientists call "hard" power. The issuing country gains geopolitical influence. Nor can we discount the enhanced prestige and status that is associated with international money—"soft" power, according to political scientists. As Nobel laureate Robert Mundell (1993) once wrote, "Great powers have great currencies."

There may also be disadvantages for the issuer, of course, especially once a substantial overhang of its currency accumulates in foreign hands. Interest rates might have to be raised to sustain the money's value in exchange markets. Ultimately, policy autonomy may be seriously compromised by the need to avert a flight to other assets. As Britain's long ordeal after World War II testifies, the defense of a great currency—once in decline—can be very costly indeed. Both at home and abroad, significant sacrifices and concessions may be required.

All these matters are at issue when governments choose what money to use as a reserve currency. The preferences of market actors, based essentially on economic calculus, also play a role; no government will opt for a currency that is not already widely used by the private sector. Central bankers are clearly sensitive to issues of liquidity, exchange convenience, and comparative rates of return. But when choices are made from the small pool of alternatives favored at the market level, political factors are sure to intervene, too. Key considerations include both the quality of governance in a currency's home economy and the nature of relationships between states. Is the issuer of a currency capable of ensuring political stability at home? Can it

project power abroad? Does it enjoy strong intergovernmental ties—perhaps a traditional patron-client linkage or a formal military alliance? The future of reserve currencies is a matter of *political economy*, not economics alone.

Runner-up

Consider the euro, for instance, widely considered to be the most natural rival to the dollar. The euro began life a decade ago with many of the attributes essential to international acceptance, including a large economic base, political stability, and an enviably low rate of inflation, all backed by a joint monetary authority, the European Central Bank, which is fully committed to preserving confidence in the money's future value. Europe is the equal of the United States in output and trade. Why, many ask, should it not be America's equal in currency matters, too?

But the question overlooks the fact that, for all its strengths, the euro is also handicapped by several critical shortcomings. Among these is a strong antigrowth bias built into the euro area's provisions for monetary and fiscal policy, compounding other factors that tend to weaken Europe's output potential (for instance, aging populations, rigid labor markets, and strict government regulations). A sluggish European economy can hardly be expected to make the euro attractive for trading or investment purposes. And the familiar ambiguities of the euro area's governance structure are bound to give outsiders pause. Everyone knows that the euro is an artificial construct, the complex product of an international treaty, which can be only as good as the multilateral agreement underlying it.

Not surprisingly, therefore, the euro's international reception has been relatively muted. In private market activity,

adjusting for the elimination of intra-euro area transactions, the euro has managed to do little more than hold its own compared with the past shares of its several “legacy” currencies. Given that Germany’s old deutsche mark had already attained a number-two ranking on the global stage, anything less for the euro would have been a real shock. After a fast start, market use of the euro has broadly stabilized for the past half-decade. Moreover, growth of usage has been uneven across sectors—greatest in issuance of debt securities but scarcely noticeable in such areas as foreign exchange trading. Activity has also been concentrated in economies with close geographical and/or institutional links to the euro area—what might be considered the euro’s natural hinterland in Europe, the Mediterranean, and parts of Africa.

Yet many continue to predict a bright future for the euro at the government level, as a reserve currency. Although Europe’s money today accounts for no more than a quarter of global reserves, compared with a nearly two-thirds share for the dollar, the euro could nonetheless surpass the greenback within as few as 10 years, according to one well-publicized econometric forecast (Chinn and Frankel, 2008). But is that realistic? A statistical study highlighting no more than three causal variables, all economic in nature, can hardly be considered definitive. Where are the diplomatic and military considerations that are bound to play a major role in shaping government choices? To ignore the political side in this context is like trying to mount a performance of Hamlet without the prince.

Japan, for instance, has long relied on a formal security umbrella provided by the United States to protect it against external threats; and the same, less formally, may be said of most of the major Gulf oil exporters as well. Can we really imagine any of these nations, all very large dollar holders, casually jeopardizing their established ties to Washington for the sake of a few basis points of return on their reserves? The euro area, as we know, is composed of a gaggle of sovereign states with interests that only partly coincide in practice. It defies the imagination to believe that Europe could substitute effectively for the political or military influence of the United States in the Middle East or beyond. Scenarios based on parsimonious econometric models surely have their uses, but they are almost certainly incomplete and misleading, if not downright wrong.

Also-rans and other possibilities

Are there any other possibilities? Japan’s yen was once thought to be the dollar’s heir apparent but now looks more like a sad, faded also-ran. During the 1970s and 1980s, when the fast-growing Japanese economy seemed destined for superpower status, international use of the yen accelerated swiftly, particularly in global bond markets. But, at the end of the 1980s, the bursting of Japan’s “bubble economy” abruptly halted the currency’s upward trajectory. Today, after years of domestic stagnation, the yen appears to face a gradual erosion of market standing not unlike sterling’s long decline in an earlier era.

As the yen declines, could China’s yuan rise? The currency of one of the world’s largest economies, the renminbi (“people’s money”) certainly has much going for it. International use, however, remains rudimentary despite recent efforts by Beijing

to broaden the currency’s appeal. Acceptance is discouraged by obstacles far more severe even than anything blocking the euro or yen, including a full panoply of capital controls and a severely underdeveloped financial system. In time, these handicaps may be surmounted—but not anytime soon.

Dark horse

Most recently, debate has turned to the possibility of a new world reserve currency, most likely building on the already existing SDR. Stimulated in particular by comments from Chinese and Russian officials, the idea has been endorsed by a United Nations commission headed by former World Bank chief economist Joseph Stiglitz. Some see a start in the new bonds to be issued by the IMF, which China and Russia aim to use to diversify a portion of their reserves away from the dollar. But here too the obstacles are daunting. Even with the new \$250 billion allocation of SDRs just implemented by the IMF, total SDRs in existence will amount to less than 5 percent of global reserves. Can enough be created to make a significant difference? Can supply be provided more flexibly? And most critically, who would have the authority to manage it? Without an effective government to back it, a world reserve currency of any kind—whether based on the SDR or invented *de novo*—would have difficulty attaining even a minimal level of credibility. The ambiguities of the euro area’s governance structure would seem trivial by comparison.

In fact, nothing better illustrates the politics inherent in the choice of reserve currencies. Large dollar holders like China and Russia are understandably frustrated by the lack of satisfactory alternatives to the greenback and fearful of what might happen to the value of their hoards should there be a run on the U.S. currency. But, more to the point, both also are aspiring powers that make no secret of their resentment of what they call Washington’s global “hegemony.” Each is well aware of the role played by the dollar in underwriting U.S. geopolitical privileges. In their appeals for a substitute for the greenback, therefore, it is hard not to see an implicit campaign to clip the American eagle’s wings. The idea has symbolic value as a threat to U.S. hard and soft power. Whether it has any practical plausibility is of distinctly secondary importance.

Fragmented system

In short, while prospects for the dollar may not be as bright as they once were, the outlook for its main rivals appears little better. Some movement away from the greenback can be expected as the center of gravity in the world economy shifts toward China, India, and other emerging markets, which now account for the largest share of global reserves. Not many of these countries are as close to the United States as America’s traditional allies in Europe and Japan. But the scope of any turn away from the dollar is sure to be limited by the lack of a clearly attractive alternative.

A more fragmented currency system thus seems in the offing, with much competition and no money clearly dominant. The economic and political impacts could be considerable, despite the shock absorbers provided by floating exchange

rates. Movements of currency values cannot always compensate for inconsistencies of policy behavior and may themselves become a source of stress if manipulated by governments or amplified by speculative market behavior. Without some form of leadership to assure a minimal degree of compatibility among national policies, global monetary relations will be at constant risk of instability or worse.

To be sure, a more fragmented system would not necessarily be a bad thing. Indeed, it might even turn out to be an improvement. For many, the greatest threat to monetary stability over the long term is to be found in the United States' mammoth current account deficits. As the supplier of the world's most popular currency, the United States is in the position of a monopolist that has grown complacent abusing its "exorbitant privilege." But once the dollar's supremacy is eroded by emergent challengers, goes the argument, the United States would finally be forced to curb its appetite for foreign savings, lowering the risk of future crises. Much depends, however, on the kind of relationship that develops among the system's leaders. The last time the world was obliged to live with a fragmented currency system, during the interwar period, the outcome was—to say the least—dismal. A lack of cooperation between the British, with their weakened pound, and a self-consciously isolationist United States was a critical cause of the financial calamities that followed the stock market crash of 1929. Can we expect better this time around?

Optimists emphasize how much conditions have changed since the interwar years. In contrast to the years after World

War I, an array of multilateral organizations and forums have developed to institutionalize cooperative practices, from the IMF to the Group of 20. Past experience has provided some pointed lessons about the costs of unbridled competition among states. Governments have a much better sense of where their enlightened self-interest lies. Pessimists, by contrast, stress the enduring imperatives of national sovereignty that persistently compel governments to elevate parochial interests over what might be conceived as the common good, particularly at times of crisis. Despite the lessons of the past, monetary cooperation tends to be episodic at best and, at worst, not worth the paper that joint communiqués are written on. Time will tell whether the optimists or the pessimists have it right. ■

Benjamin J. Cohen is Professor of International Political Economy at the University of California, Santa Barbara.

References:

Chinn, Menzie, and Jeffrey Frankel, 2008, "Why the Euro Will Rival the Dollar," International Finance, Vol. 11, No. 1 (Spring), pp. 49–73.

Helleiner, Eric, and Jonathan Kirshner, eds., 2009, The Future of the Dollar (Ithaca, New York: Cornell University Press).

Mundell, Robert, 1993, "EMU and the International Monetary System: A Transatlantic Perspective," Austrian National Bank Working Paper 13 (Vienna).

■ 2009 ■ ANNUAL MEETINGS ■



WORLD BANK GROUP ■ INTERNATIONAL MONETARY FUND

WHEN: October 3–5, 2009

WHERE: Istanbul, Turkey

For further information please contact:
Annual Meetings Program of Seminars
IMF–World Bank Group
Washington, D.C. 20431 U.S.A.

Telephone: [1](202) 473-3394
Facsimile: [1](202) 623-4004
Email: seminars@worldbank.org
Website: www.worldbank.org/pos

Come to Istanbul, Turkey for the 2009 Program of Seminars

Thought Provoking →
Agenda Setting → Action Inspiring

The Program of Seminars is a premier global forum where you can join influential private sector executives from around the world, high-level policymakers from 186 countries, and other leaders in the international development and financial fields for a robust and constructive dialogue to strengthen the network for cooperation in the global economy.

Key Themes for 2009

- ◆ The Global Crisis and Policy Responses
 - ◆ Financial Crisis and the Poor
 - ◆ Crisis, Recovery & Structural Reform
 - ◆ Emerging Europe & Central Asia
 - ◆ Future of the International Financial System
 - ◆ Greening the Crisis Response
 - ◆ Private & Public Sector Roles After the Crisis

The Three-Hundred-Year Low

The Bank of England's policy rate is the lowest ever

NEVER—in more than three hundred years of combating the effects of investment bubbles, global depressions, and world wars—has the venerable Bank of England (BoE) lent money this cheaply. The current global recession has accomplished what no previous business cycle since the start of the Industrial Revolution ever achieved: it has led the U.K. central bank to lower its base rate to virtually zero. What's more, the Old Lady of Threadneedle Street (the BoE's affectionate sobriquet) has decided to move beyond interest rate cuts, adopting unconventional policies to try to restart the U.K. economy.

When the effects of the global financial crisis that began in the United States started hitting the U.K. economy in 2008, the BoE first reacted with the tried and trusted strategy of reducing official interest rates to make loans cheaper and thus keep companies and individuals borrowing and spending. The central bank cut its official bank rate, the rate

of interest at which it lends to banks, from 5.5 percent at the start of 2008 to 2 percent at year-end.

As the chart shows, the five cuts in 2008 alone dropped the BoE's bank rate to record-equaling lows last seen during banking crises in the 1880s and 1890s, and after the Great Depression and World War II in the 1930s and 1940s. Yet even an interest rate of 2 percent was not judged low enough this time to restart the economy and prevent inflation from undershooting the official target.

Leading indicators of economic activity continued to plunge, amid falling stock prices and bad news from the country's banking system. So the BoE cut the bank rate to 0.5 percent by early March 2009. And it reached for Plan B: if no one else was going to buy in this depressed environment, the Old Lady would. In a move that continues to test the boundaries of conventional central banking, the BoE started buying financial assets, primarily government bonds, in March 2009.

As good as gold

Among the key central bank functions assigned to the BoE in the 19th century was that of monopoly issuer of bank notes, which began with the Bank Charter Act of 1844. The Act also set the stage for almost a century of the gold standard by stipulating that BoE bank notes had to be backed by gold.

The BoE assumed a further central banking role in the mid- to late 1800s by becoming lender of last resort during a succession of domestic banking crises. As expanding local and international commerce led to the formation of large clearing banks, the BoE stood behind the retail banking system as a supplier—and controller—of liquidity.



Gold bullion from California delivered to Bank of England in 1849.



Founding of Bank of England by royal charter in 1694.

England goes Dutch

England's Glorious Revolution of 1688 heralded the establishment of the Bank of England. When King James II was dethroned and his son-in-law William of Orange installed as monarch, among the ideas imported from William's native Holland was that of a national bank. After several false starts, the English parliament approved a proposal by London-based Scottish entrepreneur William Paterson for a Bank of Eng-

land, and the BoE was founded by royal charter in 1694.

At first, the BoE was solely the government's banker and debt manager, as the state's demands for financing escalated in step with military campaigns culminating in the Napoleonic Wars two centuries ago. The concepts of a national debt created by government borrowing, and of credit creation as the definition of money moved beyond cash, also crystallized during the BoE's 18th century operations.



Sources: Bank of England; and www.bankofengland.co.uk



U.K. forces march into Cambrai, France, during World War I.

Open that war chest

The vast expenses of warfare were always going to test the discipline of basing money on gold and, despite a hike in the bank rate to 10 percent, World War I proved the undoing of the U.K.'s gold standard. After the link to gold was finally abandoned in 1931, parliament could order expansion of the money supply to fight the unfolding economic crisis.

The official bank rate was cut to its prior historic low of 2 percent after the Great Depression, and rates stayed at 2 percent during World War II. The combination of low interest rates and military spending helped the U.K. economy recover from the 20th century's worldwide depression.

It was a short step from abandoning gold to nationalizing the BoE altogether, which was accomplished after World War II in 1946. The government could now appoint the central bank's governor, and used the BoE to administer exchange and credit controls in the United Kingdom's austere postwar economy.

Era of volatility

The rising volatility in bank rate shown on the right of the chart started in the 1960s, when growing balance of payments deficits triggered pressure on the pound sterling's fixed exchange rate and led to a destabilizing devaluation in 1967. After sterling floated in 1973, a combination of oil price shocks and loose macroeconomic policies led to soaring U.K. inflation and a subsequent hike in the base rate to a record 17 percent in 1979.

The BoE was successful in bringing inflation down to safer levels in the 1980s. Its capacity to keep future inflationary pressures in check was further strengthened when the BoE was granted full operational independence for monetary policy in 1997. Freed from political influence and equipped with a clear mandate for price stability, the BoE has managed to keep inflation on target over the past decade. Its credibility has also allowed the BoE to move aggressively in easing monetary policy in recent months as the financial crisis unfolded.



Old-style one-pound notes, since replaced by coins.

Bank of England's bank rate



March in 1936 protests high U.K. unemployment.



BoE has kept inflation on target over the past decade.

Prepared by André Meier and Simon Willson, International Monetary Fund.



Overhauling the System

Randall Dodd



United States proposes most radical reform of financial regulation since the New Deal

THE global financial crisis has had a devastating impact on major financial markets, undermining the solvency of firms, disrupting trading liquidity, and forcing a rethinking of prudential regulation. The crisis has made these markets candidates for radical regulatory change. Whereas the regulatory focus had been on the soundness of individual banks, the crisis has shown the need to deal with the financial system as a whole, and such a systemic approach requires the proper regulation of the markets and of the transactions that reflect the interconnections between banks and other financial firms.

The change in approach is reflected in proposed regulatory standards from the Financial Stability Board, the International Organization of Securities Commissions, and such private organizations as the Group of 30 and the Institute of International Finance. Recent proposals from the U.S. Treasury Department reflect similarly fundamental changes in the approach to financial market regulations. The proposals must still be

drafted into legislation and approved by the U.S. Congress. But if legislators make few major changes, the Treasury proposals would become the first major overhaul of the U.S. financial system since the New Deal policies during the administration of President Franklin D. Roosevelt, when the world also faced a monumental economic crisis.

New Deal reforms

Over a seven-year period, starting in 1933, the United States reshaped the regulation of the market structures for banking, securities, derivatives, and mortgage and asset management (see box). New laws transformed the U.S. financial system from one plagued by fraud and frequent crises to one that set the world standard for stability, efficiency, and the ability to raise capital.

The key pieces of legislation ranged across many issues and the various financial sectors, but they are best understood when collected into categories that reflect their basic insights into markets: systemic stability, regulatory reorganization, transparency, enhancing market integrity, and reducing conflicts of interest.

Systemic stability. The Glass-Steagall Act separated traditional commercial banking activities—essentially lending and deposit-taking—from those conducted by securities broker-dealers—such as underwriting, acting as a dealer (market making), and investing in corporate stocks and bonds. As a result, the exposures of banks to cyclical fluctuations that affect securities were reduced, leaving banks more likely to be able to lend during recessions and recovery stages of the cycle. Other legislation required that certain commodity futures be traded on regulated exchanges and subjected trading in these markets to speculative position limits. The higher standard for margin (that is, collateral) at futures exchanges resulted in counterparty and market risks being more prudentially

buffered against loss. The securities acts were also designed to reduce excess volatility and provide greater market stability.

Reorganization. The Securities and Exchange Commission (SEC) was created to regulate and oversee securities markets and the asset management industry; the Federal Deposit Insurance Corporation (FDIC) was created to insure bank deposits. Substantial changes were made to the governance of the Federal Reserve System, including the make-up of the Board of Governors and the Federal Open Market Committee (FOMC).

Transparency. Corporations issuing securities in public markets were required to disclose the financial condition of their enterprises, and this was also applied to secondary market trading and to investment companies.

Market integrity. Fraud and manipulation in banking, securities, and derivatives markets were prohibited, which strengthened the hands of investors and regulatory authorities.

Conflicts of interest. These laws addressed many conflicts of interest in corporate governance and other investor areas such as asset management, especially mutual funds management. The Glass-Steagall Act also had the effect of preventing

banks, which have non-public information about corporate borrowers, from trading for their own accounts in corporate securities markets.

The system breaks down

The financial stability spawned by the New Deal began to weaken in the 1980s as deregulatory measures and innovations created gaps that left many financial firms and activities outside or inadequately covered by the regulatory framework. The securitization process took off in the 1980s and many banks shifted their main business focus from traditional lending to issuing and trading securities and derivatives. And there were excesses and misuses of securitized products and derivatives. The meteoric rise of over-the-counter (OTC) derivatives markets generated enormous trading income, while shifting risks off balance sheets. That had the effect of reducing both capital requirements and other prudential constraints on risk taking. The expansive use of special purpose entities distorted the interpretation of a bank's risk profile by allowing the institutions to keep some debts and risk exposures out of their consolidated financial statements.

The U.S. Treasury response

The U.S. Treasury Department recently released a reform proposal aimed at addressing a wide array of problems in the regulatory treatment of financial firms and markets that have become apparent during the financial crisis. Included in the proposal is a call for international cooperation to raise global standards for financial regulation and supervision. The proposal reflects the profound changes in the approach to regulation that have resulted from the financial crisis—retreating from the deregulation that began a quarter-century ago and instead harkening back to New Deal reforms. The new proposals can be understood along similar thematic lines.

Systemic measures and prudential regulation. The proposed measures include improved capital standards and liquidity requirements for all regulated financial firms. This includes measures to address off-balance-sheet items such as derivatives and lines of credit, and unconsolidated items such as special purpose entities. New requirements for provisioning for credit losses and accounting methodologies are intended to avoid procyclicality—when financial behavior magnifies the direction that the economy is already taking. The proposals also seek to reduce incentives for excess risk taking by linking executive compensation to long-term performance.

The Federal Reserve's general authority would be expanded to include systemically important financial firms (called Tier 1 financial holding companies), based on size or interconnectedness. The Fed's bank holding company oversight would be expanded to include owners of all federally insured depository firms—including previously exempt unitary thrifts and industrial loan banks.

The Treasury is seeking comprehensive regulation of OTC derivatives markets, comparable to the regulatory treatment accorded other financial markets. It seeks to move standard OTC derivatives onto regulated exchanges. It would require all OTC derivatives trades to be cleared through a clearinghouse

Key New Deal financial regulatory laws

1933 – **Glass-Steagall Act** separated commercial from investment banking activities. Created the deposit insurance program and allowed greater branching by national banks.

1933 – **Securities Act** established disclosure requirements for issuing securities (stocks or bonds) on public securities markets and established prohibitions against securities fraud and manipulation.

1934 – **Securities Exchange Act** created the Securities and Exchange Commission and authorized it for rule making and enforcement. The Act extended federal regulation to secondary market trading in securities. It also established a system for self-regulation.

1935 – (**Omnibus**) **Banking Act** reformed governance of the Federal Reserve and broadened its powers. It established the modern version of the Board of Governors and the FOMC, and it expanded their authorities. It set collateralization rates (known as “haircuts”) and terms for emergency lending by reserve banks.

1936 – **Commodity Exchange Act** increased federal prohibitions against fraud and expanded them to manipulation. It also required that futures brokers be registered and keep records. It authorized speculative position limits and prohibited the trading of options on certain agricultural products.

1940 – **Investment Company Act** regulated companies that primarily invest in other companies such as mutual funds. It required registration and disclosure, including transactions between managers and any affiliate and set rules on corporate governance regarding executive management, board of directors, and trustees.

1940 – **Investment Advisers Act** required advisers to register, report, and keep records of their client relations. It also prohibited certain transactions and fee arrangements on the basis of conflict of interest.

(sometimes called central counterparty)—which would become the counterparty to both sides of each trade—instead of the current bilateral clearing arrangements. It would also require higher collateral standards, including the use of initial margin, for all OTC derivatives trades to reduce the systemic threat from the buildup of large counterparty exposures. The proposal's trade reporting requirements would also enhance the ability of regulators to conduct market surveillance and to detect and deter fraud and manipulation.

Reorganization. The plan would create a new Financial Services Oversight Council to formalize information sharing and policy coordination among key regulatory authorities and resolve disputes over jurisdiction. The council would include the heads of the major federal financial regulators and be chaired by the Treasury Secretary and staffed by the Treasury Department.

A new National Bank Supervisor would take over the duties of the Office of Thrift Supervision (thrifts will be rechartered as national banks) and the Office of Comptroller of the Currency, which now regulates national banks.

The plan also would create an independent Financial Services Protection Agency to protect retail customers and investors—including home mortgage borrowers—in the financial services marketplace. This would entail removing consumer protection authority from the Fed but not the SEC and Commodity Futures Trading Commission. A new National Office of Insurance, within the Department of Treasury, would coordinate the national insurance industry and its state-level regulation and supervision.

The Federal Reserve would regulate the systemically important (Tier 1) financial holding companies and their subsidiaries and affiliates at home and abroad. It would have expanded authority to supervise and regulate all affiliates of bank holding companies and impose consolidated prudential regulation of financial holding companies. It would also have oversight of all systemically important payments, clearing, and settlement systems. The clearinghouses, now supervised by their respective regulator, would have access to the Fedwire (which electronically transfers payments between financial institutions), the discount window, and other Federal Reserve services.

Price transparency. The efficiency advantages of system-wide price transparency have long been thwarted by the enormous OTC derivatives markets, where prices are not public. By requiring that all OTC derivatives transactions be reported to a registry (unless otherwise reported to a clearinghouse) transparency is enhanced.

New requirements for reporting prices and volumes in OTC derivatives trades would radically change the ability of regulators to conduct market surveillance by observing once-hidden open positions and trading activities and improving the price discovery process. Better price discovery will make the trading process more competitive because end-users (non-dealers) will gain more information about the entire market.

Disclosure. The 1933 and 1934 securities acts established requirements for disclosure of key financial information as a condition for issuing and trading corporate equity and debt securities. The National Housing Act of 1934 led to the creation of the conventional home mortgage contract, standard-

ized loan documentation, and a secondary market for home mortgages. In a similar vein, the Treasury plan calls for the SEC to develop standardized documentation for securitization and enhanced disclosure requirements for the issuance and trading of securitized debt instruments. The lack of transparency and inadequate due diligence were important factors in the failure of the market for structured mortgage securities. The proposed measures appear designed to make information about the securitization structure and the underlying assets more accessible to facilitate greater due diligence on the part of investors.

Market integrity. The plan calls for the managers of most hedge funds, private equity, venture capital, and other such private pools of capital to register with the SEC, and report and keep record of their activities. The level of reporting is designed to be sufficient to allow regulators to determine whether the investment pools have become so large, leveraged, or interconnected that they threaten systemic stability.

Registration would help reduce the incidence of embezzlement and other fraud by screening managers. The position reporting requirements would address concerns about market manipulation, turbulence due to short selling, and the distorting effect of hedge funds investments on commodity prices. These measures should also help make markets more trustworthy, improve investor confidence, and raise the surveillance capacity of supervisory authorities.

The Treasury plan also would reinstall anti-fraud and anti-manipulation prohibitions in OTC derivatives markets that were removed in a deregulation act in 2000.

Conflicts of interest. The Treasury proposes to address an array of conflicted investor relations. Issuers of asset-backed securities will be required to retain a portion of credit risk to exert market discipline on underwriting and risk transference. Executive compensation schemes will be required to shift focus from short-term gains to long-term performance. Credit rating agencies will be required to disclose their business relations with issuers, including fees they collect. Investment advisors managing hedge fund and other private capital pools will be restricted from certain other activities.

A new “New Deal”

The reform proposals represent a fundamental shift from the laissez-faire emphasis on self-governing financial firms that prevailed prior to the crisis to one in which prudential measures are used to improve the conduct of financial markets and govern the externalities that arise from large-scale risk taking. They appear to follow the same economic wisdom as those from the New Deal that reshaped the financial markets following the 1929 market crash and ensuing bank failures. The reforms of the 1930s produced a strong record of success. That is a daunting benchmark of comparison to this modern sequel, but the Treasury proposal has two advantages New Deal reformers did not: lessons of the New Deal experience itself and knowledge that the regulatory framework will need to anticipate future innovations. ■

Randall Dodd is Senior Financial Sector Expert in the IMF's Monetary and Capital Markets Department.

Anticipating the Next Crisis

What can early warning systems be expected to deliver?

Atish R. Ghosh, Jonathan D. Ostry, and Natalia Tamirisa

“Often public officials have two unfortunate incentives: to give undue attention to worst-case scenarios and to pay no attention to them at all. Sometimes their electoral prospects, or their overall popularity, depend on one or the other.”

Cass R. Sunstein, *Worst-Case Scenarios*

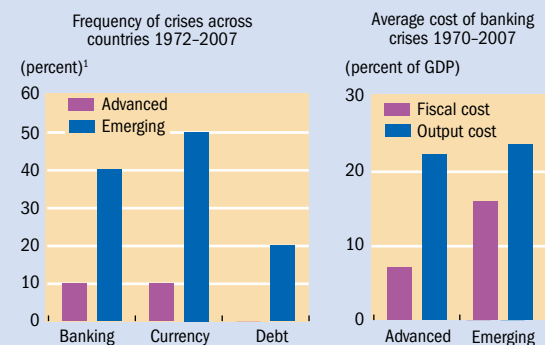
THE current global financial turmoil has rekindled the interest of both policymakers and the general public—after nearly a decade of calm since the emerging market crises of the 1990s—in early warning systems (EWS) to anticipate future financial crises. But what alarms can such systems realistically sound? How would they work? And would they be effective?

Experience with past crises suggests that, for both advanced and emerging economies, crises are very costly (see chart). Whereas each differs in its details, nearly all reflect a confluence of some underlying economic vulnerability and a specific crisis trigger. The underlying vulnerability is often a credit or asset price

bubble, a balance sheet mismatch (excessive borrowing in foreign currency, at too-short maturities, or with inadequate capitalization), whereas the crisis trigger can be almost any event—political turmoil, terms of trade shocks, contagion from other countries, or, to take the example of the current crisis, the collapse of the subprime market (see table).

Costly crises

While crises are more common in emerging economies, advanced economies are not immune.



Source: Laeven and Valencia (2008).

¹Frequency of crises measured by number of crisis episodes in percent of the total number of country years in respective group samples.

This characterization of crises—as a specific trigger superimposed on an underlying vulnerability—leads to two conclusions. First, because the specific event that triggers the crisis is unpredictable, so are crises. Second, this unpredictability makes it difficult to persuade policymakers to take preventive measures, especially because the measures themselves are likely to be economically or politically costly. The corollary is that early warning efforts should be directed not so much at trying to call the next crisis as at identifying underlying vulnerabilities without which crises are unlikely to occur and then adopting policies to address those vulnerabilities.

What can an EWS realistically hope to accomplish?

Ideally, an early warning system would flag growing vulnerabilities sufficiently in advance—and sufficiently convincingly—that corrective actions can be taken to prevent even the risk of a crisis from developing. Pricking incipient asset price bubbles, restricting unhedged foreign currency exposure of banks or borrowers, limiting leverage, and requiring higher capital ratios are all examples of ways to reduce the buildup of vulnerabilities.

But such measures are hardly likely to be popular: homeowners would prefer to see a rapid increase in the value of their house, borrowers may be able to borrow more cheaply in foreign currency, and financial institutions do not like to have to hold more capital because it erodes their profitabil-

ity. Therefore, a compelling case for policy action needs to explain how crises can propagate across sectors, markets, and countries. Finally, because it will never be possible to avoid every vulnerability, the EWS should also sound the alarm about imminent risks, to allow countries to brace themselves against impending crises and policymakers to put contingency plans into place.

Of course, deciding what an EWS should do is one thing; designing one that does it is another. The current global crisis illustrates the challenges. While a number of commentators observed the very rapid increase in U.S. house prices—symptomatic of the growing vulnerabilities—there was less appreciation of how, in this environment, the lightly regulated and highly leveraged shadow banking system (including investment banks and securitization vehicles) could turn the relatively minor problem of subprime mortgages into the greatest financial crisis since the Great Depression. And without such an ability to “connect the dots” there was little incentive for preventive policies (such as forcing banks to hold more capital against off-balance-sheet liabilities).

How to go about developing an EWS

A first step in developing an EWS is determining what events it should warn of. The early warning models developed in the aftermath of the emerging market crises of the 1990s focused on external events—sudden stops of capital inflows—because most crises in these countries were caused by, or at least accompanied by, sharp reversals of capital flows. (More parochially for the IMF, such crises give rise to external financing needs, so early warning about them helps the IMF plan for possible calls on its lending resources.) In advanced economies, though crises may have an external dimension, they are more likely to be centered on the financial sector. In addition, sharp declines in output—beyond mere cyclical fluctuations—are likely to be of independent interest to policymakers, regardless of whether they are accompanied by a financial crisis.

Once crisis is defined, the next step is developing the appropriate analytical toolkit. This toolkit needs to combine formal quantitative analysis with more heuristic methods such as broad-based consultations and judgment. The role of quantitative tools in this regard is fourfold: first, providing a means for searching systematically for vulnerabilities; second, exploring linkages, especially through the financial sector that could allow a crisis—should it occur—to mutate and propagate across sectors, across markets, and across countries; third, quantifying both the likelihood and repercussions of a crisis materializing, given the identified vulnerabilities; and fourth, disciplining and informing the use of judgment.

Early versions of the EWS typically relied on a single “crisis probability” model that correlated macroeconomic indicators (for instance, in emerging market countries, the size of the current account deficit or the ratio of reserves to short-term debt) to crises.

More modern variants recognize that, while such models remain central to the exercise, the overall macroeconomic and financial outlook, consonance with other sectoral models

Triggering crises

Crises have been caused by a variety of vulnerabilities and triggers.

| Crisis | Vulnerability | Trigger |
|----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Mexico (1994) | Government's short-term external (and foreign-exchange-denominated) liabilities | Tightening of U.S. monetary policy, political shocks |
| Thailand (1997) | Financial and nonfinancial corporate sector external liabilities; concentrated exposure of finance companies to property sector | Terms of trade deterioration; asset price deflation |
| Indonesia (1997) | Corporate sector external liabilities; concentration of banking system assets in real estate/property-related lending; high corporate debt-equity ratio | Contagion from Thailand's crisis; banking crisis |
| Turkey (2000) | Government short-term liabilities; banking system foreign exchange and maturity mismatches | Widening current account deficit, real exchange rate appreciation, terms of trade shock; uncertainty about political will of the government to undertake reforms in the financial sector |
| Finland (1991) | Credit and house price booms, overheating, thin capitalization of banks, concentrated loan exposures, domestic lending in foreign currency, financial deregulation without strengthening of prudential regulation and supervision; weaknesses in risk management at the individual bank level | Tightening of monetary policy, collapse of trade with the Council for Mutual Economic Assistance; exchange rate depreciation |
| Norway (1988) | | |
| Sweden (1991) | | |
| United States (2007) | Credit and house price boom; weaknesses in financial regulation resulting in a buildup of leverage and mispricing of risk | Collapse of the subprime mortgage market |

Sources: Ghosh and others (2008); and Drees and Pazarbaşıoğlu (1998).

Peering inside the EWS toolkit

What analytical tools does an early warning system require? While details vary, an effective EWS toolkit would likely comprise several elements, including an overview of the global macroeconomic and financial outlook, an evaluation of country and sectoral vulnerabilities, and an analysis of cross-country and cross-sectoral spillovers.

Outlook. Analyses of trends in the global macroeconomic and financial environment draw on market-based measures of financial and sovereign risks, dispersion of private sector economic forecasts, and fan charts summarizing risks around baseline economic projections. Complementing these, to provide the broad context for the analysis of tail risks in the EWS, are trends in national and sectoral savings-investment balances, external imbalances, and exchange rate misalignments.

Summary measures of crisis probability, duration, and depth. A number of EWS methodologies have been developed to summarize countries' vulnerabilities to external, financial, growth, and other types of crisis, drawing on a broad range of economic and financial indicators. Some of these tools use probit models while others rely on nonparametric techniques, which identify thresholds for individual vulnerability indicators depending on their ability to distinguish crisis and

and analyses, high-frequency market data, and simulations of cross-border spillovers may also be essential for arriving at a balanced and comprehensive assessment of vulnerabilities that could portend a crisis (for a more technical discussion of tools for an EWS, see box).

But an early warning system cannot rely solely on formal quantitative tools. The unique and diverse nature of crises inherently limits the ability of statistical tools to extract information that may be useful for identifying the next crisis or take full account of country-specific factors. Complementing these quantitative tools, therefore, are approaches such as consultations with policymakers, market participants and academics, as well as the application of experience-based "rules of thumb," educated guesses, intuitive judgments, common sense, and "out-of-the box" thinking—all of which help spot new sources of vulnerabilities, bearing in mind that the next crisis may be very different from previous ones.

How to persuade policymakers

Beyond the technical difficulties of identifying vulnerabilities, perhaps the greatest challenge for any EWS is persuading policymakers to act on them. This puts a premium on clear and candid communication of early warnings, substantiated by comprehensive analyses. These analyses need to include a description of the underlying sources of vulnerability, of shocks that may cause the vulnerability to unwind, and of how these shocks could propagate across sectors, markets, and countries. Lastly, early warnings need to be accompanied by a clear set of policy options, emphasizing trade-offs between addressing different types of risks and underscoring the need for international policy coordination. Commu-

nication needs to be carefully calibrated—with some messages transmitted in a confidential manner to policymakers while other, less sensitive information, is released in the public domain.

Measures of sectoral vulnerabilities. To achieve consonance between models of overall crisis probabilities and sectoral analyses, specialized sectoral methodologies can be used. Sectoral tools can focus on specific sources of vulnerability (for example, house price misalignments or unsustainable fiscal positions). High-frequency financial market indicators can help synthesize forward-looking information and anticipate rapidly deteriorating financial conditions.

Spillovers across countries, sectors, and markets. Developing tail risk scenarios requires an understanding of how shocks are transmitted across various countries and markets. For example, data on cross-border bank exposures could help identify potential for country-to-country contagion through bank lending channels. Likewise, various tools can help evaluate potential for spillovers from financial sector shocks to the sovereign and nonfinancial corporate sectors, including drawing on market perceptions of such spillovers.

nication needs to be carefully calibrated—with some messages transmitted in a confidential manner to policymakers while other, less sensitive information, is released in the public domain.

The bottom line

A realistic yet still ambitious goal for an EWS is to raise flags about possible worst-case scenarios and present policymakers with options for how best to respond. This requires rigorous, forward-looking analysis, sound judgment, and sharp communication. But even a perfectly designed EWS may not be able to predict and prevent all crises and may give rise to too many false alarms. Will policymakers be ready to listen when the global financial crisis passes? ■

Jonathan D. Ostry is Deputy Director, Atish R. Ghosh is Chief of the Systemic Issues Division, and Natalia Tamirisa is Assistant to the Director, all in the IMF's Research Department.

References

- Drees, Burkhard, and Ceyla Pazarbaşıoğlu, 1998, The Nordic Banking Crisis: Pitfalls in Financial Liberalization, *IMF Occasional Paper 161* (Washington: International Monetary Fund).
- Ghosh, Atish R., and others, 2008, IMF Support and Crisis Prevention, *IMF Occasional Paper 262* (Washington: International Monetary Fund).
- Laeven, Luc, and Fabian Valencia, 2008, "Systemic Banking Crises: A New Database," *IMF Working Paper 08/224* (Washington: International Monetary Fund).
- Sunstein, Cass R., 2007, *Worst-Case Scenarios* (Cambridge, Massachusetts, and London, England: Harvard University Press).





Faces of the Crisis

One Crisis, Six Lives

SIX people in six different countries. They have never met each other, and most likely never will, but they all have one thing in common. Together with millions of others, they have become the innocent victims of the financial panic that swept the world following the demise of U.S. investment bank Lehman Brothers on September 14, 2008.

Their stories, told here in their own voices, illustrate better than any economic analysis just how integrated the world is today, and how intertwined our fates have become as a consequence. Their stories also confirm that, sadly, the poor and less well-educated usually suffer the most and have the least ability to resist an economic downturn.

The social cost of the crisis is set to keep rising for some time. Unemployment—the symbol of the Great Depression—will get nowhere near the levels of the 1930s. But, as a lagging indicator, unemployment worldwide is still expected to go on increasing well into 2010. The International Labor Organization thinks that as many as 50 million people could lose their jobs before this is all over. Of course, in emerging and low-income countries, where social safety nets are weak or nonexistent, the human cost from unemployment is even higher. Where it can, the IMF is encouraging governments to step up protection for the poor and most vulnerable.

Six people, six lives, all turned upside down by one global economic crisis.



Francette Picard, from Haiti, survives on remittances sent home by cousin, Claude Bruno.



Claude Bruno earns money working as a dishwasher in a nursing home.

Haiti

Haiti's Lifeline from the United States

FRANCETTE Picard, 57, a single mother, supports herself and her two daughters with the monthly remittances received from her cousin, Claude Bruno, who lives in the United States. Before the economic crisis, she would receive about \$250 a month. That has now shriveled to an occasional \$30–60.

“He would send me money to pay for school and he would also send us food, but since the economic problems, he hasn’t been able to do that,” she says. “He called me to say that (it is) because things are difficult for him over there. In one week he might work three days and then have one or two weeks without working.”

After years of double-digit growth, the World Bank is predicting a worldwide drop of 7–10 percent in remittance flows this year. Haiti has so far bucked the trend in Latin America and the Caribbean of declining remittances, but the outlook remains precarious for the small Caribbean country.

“Thankfully, the fall in remittances is not as bad as we expected, but with the population in Haiti growing at 2 percent a year, it is not going to be a good year,” said Corinne Delechat of the International Monetary Fund. “Remittances are the one thing that keep many families going in Haiti.”

Money sent home by Haiti’s sizable diaspora represents the single largest source of foreign currency for the country and makes up over a quarter of its GDP, according to the Inter-American Development Bank. The amounts remitted are typically small—perhaps \$100 a month—but in 2008, they totaled \$1.25 billion, 2½ times the value of exports. The money is used to meet basic needs like food, housing, and education.

Just over an hour’s flight from the United States, Haiti is the poorest country in the western hemisphere. Its recent history has been pockmarked by violence, political instability, scarce resources, and natural disasters. According to the

United Nations, 80 percent of the population live on \$2 or less a day.

Earlier this year, analysts were predicting that Haiti, like the rest of the world, would see a sharp fall in remittances off the back of the economic slump in North America—home to the majority of the two million Haitians living abroad. Contrary to expectations, however, the level of remittances not only remained steady, but has even seen a slight increase.

“Haiti is a country of such profound need that relatives abroad know the alternative if they stop sending money, so they are even more conscious of the need to send,” says Gregory Watson of the Inter-American Development Bank.

It is this that drives Picard’s cousin, Claude Bruno, to continue sending money, despite his own needs. At an age when many of his peers have started to think about retirement, the 61-year-old spends 8 hours a day in a hot, damp room washing dishes for the inhabitants of a nursing home in New Jersey.

The global slowdown and the 9.5 percent unemployment rate in the United States is causing immigrants there to send less money to family throughout Latin America and the Caribbean. Analysts believe the sustained level of support to Haiti could be because the remittances are typically small, and so are more likely to be immune to fluctuating personal circumstances, while those sectors in which Haitian migrants are concentrated, such as the service sector, have been less affected by the downturn.

That is small comfort for Francette Picard who is facing eviction from her home and resists going to the doctor to get treatment for headaches brought on by stress. “After midnight, I cannot sleep until the sun rises for thinking. Sometimes, I ask myself: What am I going to give to the children in the morning? I have to make their lunchboxes but you can’t sleep when you don’t have a penny.”

Francette instinctively pinpoints her plight, and that of many of her fellow Haitians, with the outlook in the United States.

“We are completely lost, because without the United States, we in Haiti cannot live. It’s the diaspora which supports this country.” ■



home in New Jersey, United States.



Ignace Koffi Kassi says the crisis has made it even more difficult for cocoa farmers in Côte d'Ivoire to make ends meet.

Côte d'Ivoire

Farming Made More Difficult

IGNACE Koffi Kassi is a man who usually maintains a bright outlook on life. But ask him about his livelihood, farming cocoa, and you know he is preoccupied. "It is not easy to prosper as a cocoa planter in Côte d'Ivoire. Conditions are very difficult," he says.

Kassi, a big man, his muscles shaped by wielding a machete every day, is the father of 7 children. "But when I add it all up, I have at least 15 people dependent on me," he says. In an attempt to supplement his income, he recently diversified his crop by planting oil palms and rubber trees.

Once one of the most prosperous countries in West Africa, Côte d'Ivoire, a country of 19 million people, recently emerged from conflict. Economic revival was cut short by a military coup in 1999 and the start of a civil war in 2002. A transition government took power in 2007, and set about the task of rebuilding the country.

The global economic crisis is now making this task more difficult, not just for Côte d'Ivoire, but for the whole African continent. "Africa currently finds itself the innocent victim of a financial crisis that has its origin in advanced economies. Coming so soon after last year's food and fuel price shock, the global recession adds to the vulnerabilities of low-income countries through falling commodity prices, reduced trade and investment, and threats to development assistance," IMF Managing Director Dominique Strauss-Kahn said, speaking at the end of a trip to Côte d'Ivoire on May 27.

The IMF recently approved a \$566 million loan for Côte d'Ivoire to help it push economic development along, and the country has also benefited from debt relief. But the global credit crunch has made it more difficult to attract much-needed foreign direct investment, including for cocoa farming. Côte d'Ivoire is the world's largest producer of cocoa, and cocoa is the country's main export, making up some 35 percent of goods sent abroad. The cocoa sector creates jobs for

more than 4 million people and generates \$1.4 billion worth of export revenue annually.

Cocoa prices were until recently at a historic high, but the gains have not trickled down to the country's small cocoa farmers. Kassi struggles with outdated equipment, lack of financing, and poor infrastructure that make it difficult to bring produce to local markets, let alone foreign ones. "We are an underdeveloped country, everything is done as in the old days, and cocoa is harvested with a machete, a tool of the past. There is no fertilizer," he complains.

Standing next to one of his cocoa trees, Kassi says that help from the international community, be it aid or debt relief, doesn't seem to lead to any tangible improvements for farmers like himself. "There is talk about building schools and hospitals. But if the grower cannot earn the money for health care and clothing and to send his children to school, what interest could farmers possibly have in the country qualifying for debt relief? What is needed is for taxes to be lowered and to give growers the ability to produce good quality cocoa."

Kassi thinks the global economic crisis may prove to be the last straw. "We have had problems for a long time but the crisis is killing us. Optimism loses ground and pessimism takes over. Farmers want to know when they will see an end to their suffering."

He would like to see the government take action to improve the profit margin of farmers. "We would like the issue of farmers' remuneration included in various discussions between the government and the development partners. After all, farmers are the ones who keep Côte d'Ivoire's economy going."

The good news, says IMF economist Alexei Kireyev, is that the government is stepping up reform with help from the international community. "A stepwise reduction of indirect taxation on cocoa from 32 percent to 22 percent by 2011 will increase the incomes of farmers like Koffi Kassi," he says. The government is also overhauling regulation of the sector, with a view to improving governance and transparency.

So there is hope that Kassi will soon see some of the changes he thinks are so desperately needed. In any case, he has no choice but to soldier on. There are 15 mouths to be fed, after all. ■



Gustavo Ramirez has seen his work hours decline in the port of Buenos Aires, Argentina.



Left to right: Nicole, 13; Solange, 16; wife, Evelina; Martina,

Argentina

No Port in This Global Storm

GUSTAVO Ramirez had been on a slow, steady climb up the economic ladder.

After nearly three years as a dockworker in the port of Buenos Aires, he'd been able to move his wife, Evelina, and four daughters from a one-bedroom apartment into a modest but more spacious flat in the working-class neighborhood of Barracas. Ramirez and Evelina, who works at a medical laboratory, were sending their 13-year-old to private school, dining out several times a month, and taking an occasional trip. Ramirez, 37, had resumed studying to become an elementary school teacher—a position that might not pay more than his job as a stevedore in the port, but one that would pay large social dividends.

Then the global economic crisis struck.

Argentina, like many emerging economies, had hoped to avoid the turmoil in advanced economies that had its roots in the 2007 decline in the U.S. mortgage market. But by the end of 2008, the sharp economic decline in advanced countries spread to emerging markets such as Argentina.

A weak global economy and strapped trade finance combined to trigger a collapse in global trade that began late last year. Trade was off more than 20 percent in the first half of 2009 and the IMF estimates it will decline around 12 percent for the full year. When world trade contracted sharply, Argentina's foreign trade declined too. Argentine exports fell, while imports plummeted. During the first four months of 2009, the volume of goods moving through the port of Buenos Aires declined 32 percent from the same period in 2008.

Work evaporated at the port on the south shore of the giant estuary, the Rio de la Plata. "One day there was a lot of work, the next day there wasn't," Ramirez lamented.

Until late last year, Ramirez, like the other 1,500-odd port workers, was averaging about 24 days of work a month, he says. Now work has been cut back sharply. Ramirez works

roughly 14 or 15 days a month. More senior workers are guaranteed more days than Ramirez, while less senior get fewer.

Ramirez works at Terminales Rio de la Plata, which operates three of the five large terminals that make up the city port—through which passes nearly all of Argentina's import and export container traffic and a sizable portion of its total foreign trade. Most agricultural exports are shipped from ports west of the city on the Parana River.

The port job was an economic godsend for Ramirez. He'd been working 12 hours a day at a small store with days off mid-week. Not only were the wages low, the toll on family time was high. Three years ago, at a school function for his daughter Nicole—an accomplished young gymnast who has a bag of trophies tied to her top bunk—he learned of a job at the ports. The higher pay enabled the family to advance economically.

Ramirez is philosophical about his sudden cut in pay (Evelina's paycheck has mainly been steady). It's got its bad sides, he admits. It is much more difficult to get ahead and, since March, the family has been unable to pay all its bills—despite belt-tightening.

But life is better than it was "three or four years ago," and the crisis has brought the family closer together. Solange, 16, Ramirez's daughter from a previous marriage, has just moved in—so recently that the sign on the bedroom door announcing that Nicole, 13, Julieta, 5, and Martina, 2, sleep there had not yet been updated to include their older sister.

Moreover, Ramirez says, he has also been able to use his newfound free time to volunteer at the union, which he says he finds very satisfying.

Still, Ramirez is anxious about the things over which he thinks he, and Argentina, have little control. He worries that the global economic crisis will worsen into something like the Great Depression of the 1930s. For Argentines, this crisis is palpably different from earlier ones, Ramirez says. It is not homegrown but "much more widespread," emanating from world politics and economics external to the large South American nation, he says. ■



2; Julieta, 5, and Ramirez.



Shital Patel was laid off from Morgan Stanley in New York, United States, over a year ago.

United States

Banking on a New Job

SHITAL Patel still refers to Morgan Stanley as “we” and uses the present tense when she talks about her old employer.

The former research associate was let go by the New York investment bank in May 2008, in the weeks after the downfall of the troubled investment bank Bear Stearns. Patel, 31, joined the ranks of thousands of young, well-educated, smart and ambitious professionals in the U.S. financial services industry unemployed as a result of the economic crisis.

“I was always the smart one with the great job, and suddenly I had to figure out who I am and what do I have to offer,” says Patel.

The first few weeks Patel was in shock, but immersed herself in a job hunting routine. She had eight weeks of outplacement services to help her find work, which were part of her severance package from Morgan Stanley.

In the summer of 2008, Patel was getting called to interviews and she was hopeful. Then in September, Lehman Brothers collapsed and “everything fell off the map,” says Patel.

Originally studying to be a doctor, Patel discovered economics when she took a course as an undergraduate at the University of Pennsylvania, and never looked back. She joined the Federal Reserve in Washington, D.C. straight out of college, and worked on the consumer spending and household portions of the Fed’s economic forecasts.

Patel liked her work and her colleagues, but when an offer to interview for a job at Morgan Stanley literally appeared in her inbox, she jumped at the chance.

“It was my dream to work at a big investment bank,” says Patel.

Patel worked as an economist on Morgan Stanley’s U.S. economic forecast, and eventually her role expanded and she was coordinating the bank’s global economic forecast. The learning curve was steep initially, and Patel loved her work.

But eight years after her first day on the job, Patel became yet another grim unemployment statistic generated by the financial crisis.

Job losses in the U.S. financial services industry were the harbinger of worse to come. What began as a crisis in sub-prime mortgages in the United States quickly spread to the global economy and caused the worst recession in 70 years. In 2008, the global economy contracted for the first time since World War II and jobs were lost in countries around the world that had relied on U.S. consumers to purchase their goods. The International Labor Organization predicts global unemployment will reach 210 million by the end of 2009. To date, just over half a million jobs have been lost in the financial services industry, according to U.S. Department of Labor statistics.

According to the IMF, the trouble in the U.S. labor markets is expected to restrain growth for some time and GDP is expected to contract by 2.5 percent in 2009. Many of these jobs are not expected to return, even when the industry recovers, according to a New York City fiscal monitor report published in May.

With many well-qualified people let go, the pool of talent competing for far fewer jobs has grown larger. Patel says employers tell her in job interviews they are not looking for economists.

“Being an economist is a scarlet letter,” she says. “If you’re looking through a stack of 500 résumés, being an economist is an easy way to get rid of one more.”

Patel’s finances were in good shape before she was laid off, because she had been living within her means. She owns her modest apartment in Greenwich Village, and has relied on a severance package from Morgan Stanley, some unemployment benefits, and her savings to make ends meet.

The loss of a job can be as stressful as dealing with death or divorce, and Patel said she went through the seven stages of grief, from shock and denial to acceptance.

There have been many very low moments, but with a recent interview coming up at the New York Federal Reserve, Patel is optimistic about finding a job.

“I’m really hopeful it will happen by the end of the year,” she says. ■



Yoshinori Sato was fired from an auto factory in Japan.

Japan

Driving into a Dead End

BY most standards, Yoshinori Sato's hopes are reasonable. He wants to live with his family and he wants his old job back. The economic downturn that has devastated the Japanese auto industry means neither dream is likely to come true in the near future.

Sato, 50, moved to Yokohama seven years ago, leaving his family behind in his hometown of Hokkaido, to find work through a temporary staffing agency. Assigned to the Isuzu Motors Co. factory, he worked on the engine assembly line for trucks.

The pay was not great, he admits, but he made enough to get by. That was until November last year when 500 staff were told that the economic downturn and declining exports meant they would no longer have jobs by the end of the following month.

"It came completely out of the blue. None of us expected it," says Sato. After a day's shift, he recalls, "I went back to the staff room with four of my colleagues and there was a notice for each of us stating that because of the reduction in output it had been decided that we were to be laid off one month later."

The company requested the employees to continue to work hard until their final day of employment.

On December 26, 500 temporary workers clocked out for the last time and Sato was told that he had four days to vacate his company-owned dormitory room.

Car manufacturers in Japan are one of the largest employers of temporary workers on rolling one-year contracts. It is estimated that more than 3.8 million workers fall into that category. Rules on workers provided by labor agencies were relaxed in 2004. Japan, which has long since abandoned its old concept of "jobs for life," boasts some of the largest car manufacturers in the world but its auto industry has been among the hardest hit by the global downturn. The country's Automobile Manufacturers' Association reported

that in May 2009, exports of vehicles fell more than 55 percent from the previous year—the eighth straight month of decline. Manufacturers have responded by reducing output and shedding jobs.

Japan was not at the center of the global crisis, but the subsequent collapse in global demand and financial spillovers plunged this export-dependent economy into its worst recession in over half a century.

Tokyo has also tried to implement measures to protect the most vulnerable, including temporary workers, from the worst excesses of the downturn. Measures include relaxing the eligibility criteria for employment insurance and a planned raise in minimum overtime pay. Sato's stint as a temporary worker spilled over into his personal life, costing him his marriage and a life spent with his wife and daughter. They were left behind in Hokkaido.

"I realized that I could not afford to continue sending money to my wife, so we agreed to get divorced so that she could become eligible for government benefits—but we still love each other and we speak by phone very often."

"I used to go back to Hokkaido every spring, as my daughter's birthday is April 29th. I have always wanted them to move here when I had enough money, but that looks impossible now."

The former assembly worker is trying to retrieve his job. He sued the employment agency for payment of his wages until the end of his contract in March. Sato says the court found in his favor. While he awaits the outcome of a separate case to get the car company to take him back as a regular employee, he is volunteering his services to the All Japan Metal and Information Machinery Workers' Union. In return the union acts as guarantor on his rented apartment.

"I wanted to become a full-time employee and I tried to show that I was a good employee by coming into the office one hour early every morning to prepare the lines for the working day," he says. "All I ever wanted was to lead a normal life—I don't want luxuries—and to bring my family here and live together," he adds. "Then I was given that notice and my dream was shattered." ■



Santiago Baena's income from Madrid real estate sales has plummeted.

Spain

Frozen Housing Market

SANTIAGO Baena has seen the best and the worst of the Spanish housing market during his 20-year career in real estate.

Baena grew up working with his 14 siblings at their parents' hostel in northern Spain. He entered the real estate business in his early 30s, selling houses and commercial property, a business that was booming until a couple of years ago.

House prices in Spain nearly tripled since Baena, age 53, became a licensed real estate agent in Madrid. The Spanish economy grew rapidly in the 1990s—the “golden years” for Spanish real estate. “Huge capital gains were made from property reappraisals, easy credit, increases in the value of property, and the potential for further revaluations, generating the characteristic bubble spiral,” Baena says.

Spain's adoption of the euro in 1999 meant low borrowing costs, abundant credit, and easy financing. More than 90 percent of Spanish mortgage holders have variable rate loans, so lower rates effectively dropped the cost of housing.

But when the European Central Bank began raising interest rates in 2004, the Spanish housing market started to slow. When the global financial crisis swept across Europe three years later, Spain's economy proved especially vulnerable because economic growth had relied so heavily on credit-fueled domestic demand and the housing boom.

Today, Spain's housing market is in the doldrums. “The market is not cold—no, it is frozen,” says Baena. Indeed, home sales fell by over 50 percent between the first quarter of 2007 and the first quarter of 2009, and in 2008 alone they fell by a third. The lack of sales has hit house prices, which Spanish bank BBVA predicts will have dropped 30 percent from their 2007 peak by end-2011.

The drop in sales and prices have meant lower take-home pay for people like Baena. Real estate agents in Spain charge 3–5 percent of the sale price as commission, but most have had to lower these rates in the past couple of years. “It's better

to earn 50 percent of something than 100 percent of nothing,” Baena says. Married with four children, he has seen his income drop 10 percent in the past year, and 30 percent the year before that, as a result of the housing crisis.

The wider economy is suffering as well. Because of the housing boom, the construction sector in the Spanish economy had come to account for 9 percent of the economy and 13 percent of all jobs. With the lack of buyers, new construction has ground to a halt. “Just look up at the skyline. If there are carts or other construction tools hanging from the cranes, the project has been stopped and the equipment has been put there so that it won't be stolen. Look up, you'll see the sky full of suspended carts,” Baena says.

Wages in Spain are rigid, so most adjustment has to take place through layoffs. That means the recent drop-off in construction has aggravated Spain's already high unemployment rate, which now stands at nearly 20 percent.

The immediate future does not hold much hope for people looking for jobs. Spain's economy grew only 1.2 percent in 2008 and is expected to contract by 3–4 percent in 2009, says IMF economist Christian Henn. What Spain really needs, the IMF said in its recent assessment of the country's economy, is a new growth model. Residential construction and private consumption will no longer drive growth as they have in the past. In future, the country will have to rely more on industry and its services sector to generate jobs and growth. To do this, Spain's government needs to find ways to improve productivity and lower costs.

For Baena, and the many other people like him who relied on the housing sector for a living, the future is uncertain. “We continue to look to the future with hope,” he says, his knitted brow belying his optimistic words. ■

Acknowledgments

Argentina

Reporting: Florencia Carbone, *La Nación*, and James L. Rowe, IMF
Photography: Daniel Pessah, *La Nación*

Côte d'Ivoire

Reporting: Madeleine Akponi Djakobie, and Camilla Andersen, IMF
Photography: Eugene Salazar, IMF

Haiti

Reporting: Anderson Laforet, and Hyun-Sung Khang, IMF
Photography: Tony Belizaire, AFP

Japan

Reporting: Julian Ryall
Photography: Alfie Goodrich

Spain

Reporting: Silvia Taulés, *El Mundo*, and Marina Primorac, IMF
Photography: Silvia Taulés

United States

Reporting: Jacqueline Deslauriers, IMF
Photography: Michael Spilotro, IMF



What Is Monetary Policy?

Koshy Mathai

MONETARY policy has lived under many guises. But however it may appear, it generally boils down to adjusting the supply of money in the economy to achieve some combination of inflation and output stabilization.

Most economists would agree that in the *long run* output is fixed, so any changes in the money supply only cause prices to change. But in the *short run*, because prices and wages usually do not adjust immediately, changes in the money supply can affect the actual production of goods and services. This is why monetary policy—generally conducted by central banks such as the U.S. Federal Reserve (Fed) or the European Central Bank (ECB)—is a meaningful policy tool for achieving both inflation and growth objectives.

In a recession, for example, consumers stop spending as much as they used to; business production declines, leading firms to lay off workers and stop investing in new capacity; and foreign appetite for the country's exports may also fall. In short, there is a decline in *aggregate demand* to which government can respond with a policy that leans against the direction in which the economy is headed. Monetary policy is often that *countercyclical* tool of choice.

Such a countercyclical policy would lead to the desired expansion of output (and employment). But, because it entails an increase in the money supply, it would also result in an increase in prices. As an economy gets closer to producing at full capacity, increasing demand will put pressure on input costs, including wages. Workers then use their increased income to buy more goods and services, further bidding up prices and wages and pushing generalized inflation upward—an outcome policymakers usually want to avoid.

Twin objectives

The monetary policymaker, then, must balance price and output objectives. Indeed, even central banks, like the ECB, that only target inflation would generally admit that they also pay attention to stabilizing output and keeping the economy near full employment. And at the Fed, which has an explicit dual mandate from the U.S. Congress, the employment goal is formally recognized and placed on an equal footing with the inflation goal.

Monetary policy is not the only tool for managing aggregate demand for goods and services. Fiscal policy—taxing and spending—is another, and governments have used it

extensively during the current crisis. However, it typically takes time to legislate tax and spending changes, and once such changes have become law, they are politically difficult to reverse. Add to that concerns that consumers may not respond in the intended way to fiscal stimulus (for example, they may save rather than spend a tax cut), and it is easy to understand why monetary policy is generally viewed as the first line of defense in stabilizing the economy during a downturn. (The exception is in countries with a fixed exchange rate, where monetary policy is completely tied to the exchange rate objective.)

Independent policy

Although it is one of the government's most important economic tools, most economists think monetary policy is best conducted by a central bank (or some similar agency) that is independent of the elected government. This belief stems from academic research, some 30 years ago, that emphasized the problem of *time inconsistency*. Monetary policymakers who were less independent of the government would find it in their interest to promise low inflation to keep down inflation expectations among consumers and businesses. But later, in response to subsequent developments, they might find it hard to resist expanding the money supply, delivering an inflation surprise. That surprise would at first boost output, by making labor relatively cheap (wages change slowly), and would also reduce the real, or inflation-adjusted, value of government debt. But people would soon recognize this inflation bias and ratchet up their expectations of price increases, making it difficult for policymakers ever to achieve low inflation.

To overcome the problem of time inconsistency, some economists suggested that policymakers should commit to a rule that removed full discretion in adjusting monetary policy. In practice, though, committing credibly to a (possibly complicated) rule proved difficult. An alternative solution, which would still shield the process from politics and strengthen the public's confidence in the authorities' commitment to low inflation, was to delegate monetary policy to an *independent* central bank that was insulated from much of the political process—as was the case already in a number of economies. The evidence suggests that central bank independence is indeed associated with lower and more stable inflation.

Conducting monetary policy

How does a central bank go about changing monetary policy? The basic approach is simply to change the size of the money supply. This is usually done through open market operations, in which short-term government debt is exchanged with the private sector. If the Fed, for example, buys or borrows treasury bills from commercial banks, the central bank will add cash to the accounts, called reserves, that banks are required keep with it. That expands the money supply. By contrast, if the Fed sells or lends treasury securities to banks, the payment it receives in exchange will reduce the money supply.

While many central banks have experimented over the years with explicit targets for money growth, such targets have become much less common, because the correlation between money and prices is harder to gauge than it once was. Many central banks have switched to inflation as their target—either alone or with a possibly implicit goal for growth and/or employment.

When a central bank speaks publicly about monetary policy, it usually focuses on the interest rates it would like to see, rather than on any specific amount of money (although the desired interest rates may need to be achieved through changes in the money supply). Central banks tend to focus on one policy rate—generally a short-term, often overnight, rate that banks charge one another to borrow funds. When the central bank puts money into the system by buying or borrowing securities, colloquially called *loosening* policy, the rate declines. It usually rises when the central bank *tightens* by soaking up reserves. The central bank expects that changes in the policy rate will feed through to all the other interest rates that are relevant in the economy.

Transmission mechanisms

Changing monetary policy has important effects on aggregate demand, and thus on both output and prices. There are a number of ways in which policy actions get transmitted to the real economy (Ireland, 2008).

The one people traditionally focus on is the *interest rate channel*. If the central bank tightens, for example, borrowing costs rise, consumers are less likely to buy things they would normally finance—such as houses or cars—and businesses are less likely to invest in new equipment, software, or buildings. This reduced level of economic activity would be consistent with lower inflation because lower demand usually means lower prices.

But this is not the end of the story. A rise in interest rates also tends to reduce the net worth of businesses and individuals—the so-called *balance sheet channel*—making it tougher for them to qualify for loans at any interest rate, thus reducing spending and price pressures. A rate hike also makes banks less profitable in general and thus less willing to lend—the *bank lending channel*. High rates normally lead to an appreciation of the currency, as foreign investors seek higher returns and increase their demand for the currency. Through the *exchange rate*

channel, exports are reduced as they become more expensive, and imports rise as they become cheaper. In turn, GDP shrinks.

Monetary policy has an important additional effect on inflation through expectations—the self-fulfilling component of inflation. Many wage and price contracts are agreed to in advance, based on projections of inflation. If policymakers hike interest rates and communicate that further hikes are coming, this may convince the public that policymakers are serious about keeping inflation under control. Long-term contracts will then build in more modest wage and price increases over time, which in turn will keep actual inflation low.

When rates can go no lower

During the past two years, central banks worldwide have cut policy rates sharply—in some cases to zero—exhausting the potential for cuts. Nonetheless, they have found unconventional ways to continue easing policy.

One approach has been to purchase large quantities of financial instruments from the market. This so-called *quantitative easing* increases the size of the central bank's balance sheet and injects new cash into the economy. Banks get additional reserves (the deposits they maintain at the central bank) and the money supply grows.

A closely related option, *credit easing*, may also expand the size of the central bank's balance sheet, but the focus is more on the *composition* of that balance sheet—that is, the types of assets acquired. In the current crisis, many specific credit markets became blocked, and the result was that the interest rate channel did not work. Central banks responded by targeting those problem markets directly. For instance, the Fed set up a special facility to buy commercial paper (very short-term corporate debt) to ensure that businesses had continued access to working capital. It also bought mortgage-backed securities to sustain housing finance.

Some argue that credit easing moves monetary policy too close to industrial policy, with the central bank ensuring the flow of finance to particular parts of the market. But quantitative easing is no less controversial. It entails purchasing a more neutral asset like government debt, but it moves the central bank toward financing the government's fiscal deficit, possibly calling its independence into question.

Now that the global economy appears to be recovering, the main concern has shifted to charting an exit strategy: how can central banks unwind their extraordinary interventions and tighten policy, to ensure that inflation does not become a problem down the road?

Koshy Mathai is the IMF's Resident Representative in Sri Lanka.

Reference:

Ireland, Peter N., 2008, "Monetary Transmission Mechanism," in *The New Palgrave Dictionary of Economics*, ed. by Steven N. Durlauf and Lawrence E. Blume (Houndmills, Basingstoke, United Kingdom: Palgrave MacMillan, 2nd ed.).



Dial Growth

Handheld devices are enabling nascent economies to skip a generation of development

Man on cell phone in Rajasthan, India

ACROSS the developing world, mobile telephones are enabling countries to bypass what was once an unavoidable stage of development: the establishment of a national mail service and of land-based telecommunications. The falling unit cost, ease of use, and ever-expanding reach of mobile telephony are enabling developing countries to “leapfrog” a phase in economic evolution that once took decades to traverse.

Mobile telephones are revolutionizing the formative processes of economic development. These relatively cheap handheld personal communicators are empowering the most basic development agents, turning former functionaries reliant on erratic and remote external inputs into key decision makers with direct access to the facts they need.

In less than a generation, mobile telephony has transformed agriculture, marketing, fisheries, freight logistics, irrigation, banking, and small business in the developing world. But there are stiff upfront costs, and daunting risks, in establishing mobile telephone networks in developing countries. In this article, first Olivier Lambert looks at how foreign direct investment in developing-country telecommunications sectors is enabled and supported. Then Elizabeth Littlefield focuses on the mobile telephone function with perhaps the greatest potential development multiplier: mobile banking. Once telecommunications-sector investment is assured and once small-scale economic agents have easy and mobile access to the accelerant of financial intermediation, the article will show, more rapid development can but follow.

Short cut—at a price

Olivier Lambert

AN advantage of “leapfrog” development is that the developing country can skip or bypass stages of economic or technological evolution that were previously rites of passage for economies embarking on industrialization. Thus largely rural, primary product-exporting economies can now install state-of-the-art, large-scale wireless communications systems at a stroke. However, hand in hand with old-fashioned incremental development went equally incremental and graduated financial requirements. The disadvantage of “leapfrog” development is that it requires early and substantial capital outlays and infrastructure commitments well ahead of any payoff. Investment guarantees therefore assume a high profile.

After nearly a decade of conflict and political instability, the West African state of Guinea-Bissau is one of the poorest countries in the world. Civil war and a coup d'état have

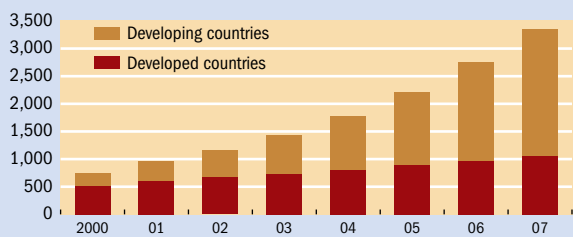
left a legacy of deteriorated physical infrastructure, weakened administrative and policy implementation capacity, unsustainable fiscal deficits, and heavy reliance on donor support. But the country abuts a more stable and prosperous neighbor, Senegal. The Senegalese telecommunications operator Sonatel invested \$25.8 million in a fully digital cellular network in Guinea-Bissau that was launched in May 2007. Sonatel had a partner in its venture: the Multilateral Investment Guarantee Agency (MIGA)—the World Bank Group's political risk insurance arm.

MIGA issued a guarantee to Sonatel for its equity investment in, and shareholder loans to, its subsidiary in Guinea-Bissau, Orange Bissau. Sonatel is covered against the risks of transfer restriction, expropriation, war and civil disturbance, and breach of contract. Sonatel's investment involved the installation, operation, and maintenance of a cellular network, as well as public pay phones and internet services that are critical to Guinea-Bissau, a country that has long suffered

New networks

The mobile phone market is especially important for developing countries, where virtually all new mobile customers in the coming years will be located.

(mobile phone subscriptions in developing and developed countries, in millions)



Source: International Telecommunication Union (ITU), World Telecommunication/ICT Database.

from low levels of investment. As of end-2008, the network had signed up 60,000 subscribers.

A study by the World Bank (2009b) supports the assertion that information and communications technology is a vehicle for growth. It points to the importance of mobile communications in rural areas, which are home to nearly half of the world's population and 75 percent of the world's poor. "The mobility, ease of use, flexible deployment, and relatively low and declining rollout costs of wireless technologies enable them to reach rural populations with low levels of income and literacy. The next billion mobile subscribers will consist mainly of the rural poor."

Generation M

The mobile phone market is especially important for developing countries, where virtually all new mobile customers in the coming years will be located (see chart and Box 1). MIGA has supported telecom investments in Benin, the Central African Republic (CAR), Ghana, Guinea, Guinea-Bissau, Mali, Mauritania, Nigeria, and Sierra Leone.

In the CAR, which ranked 180th out of 181 countries in ease of doing business in the World Bank's 2009 *Doing Business* report, attracting foreign investment has been difficult. In 2008, MIGA issued a guarantee of \$37.9 million for the installation, operation, and maintenance of a state-of-the-art CAR telecommunications network. The guarantee covers 90 percent of the investor's equity investment, protecting it against the risks of transfer restriction, expropriation, war and civil disturbance, and breach of contract. The project is vital to the economic development of the landlocked country, where fixed-line phone connections are not available to even 1 in 100 people. Subscribers benefit from access, reliable service, and reduced costs due to increased competition and diverse product offerings (see Box 2). In less than a year the network, Orange Centrafrique, had signed up 127,000 subscribers, indicating an eager consumer base. ■

At an m-bank near you

Elizabeth Littlefield

MOBILE phones can serve as a platform for bringing a country's citizens into the formal financial system, thus integrating them directly into the economic development process. Financial institutions are now offering mobile banking systems that allow customers to transfer funds to busi-

Box 1

Portable development

Just a decade ago, there were still some countries with no mobile service at all. Since then, wireless telephone coverage has enveloped the globe. Mobile phone subscriptions have skyrocketed from 1 billion in 2002 to an estimated 4.1 billion by the end of 2008, covering more than half of the world's population. The fastest growth rates have been in low-income countries. In Africa mobile phone penetration has soared from just 1 in 50 people at the turn of the century to 28 percent.

The World Bank (2009b) says this growth has been driven primarily by new wireless technologies and liberalization of telecommunications markets, which enabled faster and less costly network rollout. The total number of mobile phones in the world surpassed the number of fixed-line telephones in 2002; and mobile phones now represent the world's largest distribution platform.

Box 2

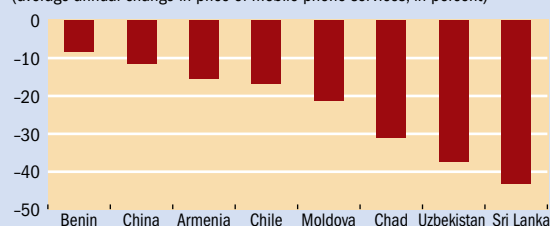
Cheaper chat

The price of access to information and communication technology (ICT) continues to fall due to technological advances, market growth, and increased competition, a trend that is especially important in allowing people in developing countries to take full advantage of ICT services. The World Bank (2009b) says that in recent years, steep price reductions have contributed to the rapid expansion in mobile phone use in many countries (see chart). Increased use of prepaid service allows mobile customers to make payments in small amounts instead of having to commit to fixed monthly subscriptions, leading to higher penetration rates in poor and rural areas.

Good reception

In recent years, steep price reductions have contributed to the rapid expansion in mobile phone use in many countries.

(average annual change in price of mobile phone services, in percent)



Source: International Telecommunication Union (ITU), World Telecommunication/ICT Database.

Note: Mobile price basket is based on the Organization for Economic Cooperation and Development low user definition and is calculated based on the prepaid price for 25 calls per month spread over the same mobile network, other mobile networks, and mobile to fixed calls and during peak, off-peak, and weekend times.

nesses and families, often radically bringing down transaction costs. Ten years ago, mobile banking or "m-banking" might have meant minivans that served as bank branches on wheels. Today, mobile banking means mobile phones and other wireless devices that offer basic transaction services in every continent.

Poor households have more complex financial needs than many realize. They save by buying building materials or live-

stock, get advances against burial societies or from shops, receive remittances, and deposit funds with neighbors. Collins and others (2009) show that households in Bangladesh use at least four informal and formal financial services, and one-third use more than 10 services. Most of these services are inconvenient, costly, and risky.

Using technology to deliver services promises to improve cost, security, and convenience for poor people, while making it commercially viable to serve them. Breadwinners in urban markets who used to carry cash home to their villages can now send electronic value home via mobile phones, saving time and money. Travelers who ran the risk of robbery now store value on mobile phones before a long trip, and then withdraw it at an agent at their destination.

Today, branchless banking channels are widely accepted as a way to extend the banking system to rural and remote areas. Banking correspondents—or agents—in post offices, gas stations, or mom-and-pop stores are increasingly seen as a way to convert electronic messages from phones or cards with point-of-sale devices into cash in the hands of poor people. Technology and the business models to turn it into a service for customers are developing in tandem. The Consultative Group to Assist the Poor (CGAP), an independent policy and research center housed at the World Bank, found in a study that there are more than a billion people worldwide who have a mobile phone but no bank account. The 147-country study, conducted with the Group Spéciale Mobile Association, estimated that up to 360 million of these unbanked, low-income people could be signed up to mobile phone-based financial services by 2012. Mobile network operators are aware of this, motivated by saturated rich-country markets and by declining revenues per user as they move into poorer countries. Operators also know mobile phone banking makes customers less likely to switch providers.

Easier, faster, cheaper, safer

The biggest success in customer adoption to date has been the M-PESA network in Kenya, which has reached more than 6.5 million customers in just over two years. It has become the preferred method for moving money for 50 percent of Kenyans. An average of 150 million Kenya shillings (\$1.96 million) is transferred through the network every day, mostly in small amounts averaging just over K Sh1,500 (\$20) per transaction. CGAP analysis and a survey by the nongovernmental organization Financial Sector Deepening Kenya show that users like the fact that the network is faster, easier to access, and safer than the alternatives. But cost probably trumps other factors as it beats the cheapest formal alternative by 45 percent. To send \$25, the post office charges 5 percent and Western Union charges 57.5 percent; but the fee with M-PESA would be 2.8 percent. In other words, using M-PESA puts \$4 million a week into the hands of poor Kenyans.

However, fewer than 1 in 10 mobile phone banking customers are actually poor, new to banking, and doing anything more than payments and transfers. Most of the new offerings, especially when led by existing banks, have served to provide more convenient bill payments for existing customers and

to decongest branches. To reach new, poor customers with a broader range of mobile financial services, their needs and preferences will need to be applied to product design, pricing, and marketing strategies. Software needs to be intuitive in different cultural settings. Hardware needs to have features that make it practical in rural settings where electricity may be scarce.

Wider m-banking signups are unlikely to happen without merchants acting as banking agents. The agents' incentives are the commissions, and possibly also increased foot traffic of more buyers entering the store. M-banking commissions still fall short of what merchants earn from other products. Filipino agents make a 10–12 percent margin on selling toothpaste, but only 1–3 percent for an m-banking cash-in transaction. But evidence from other countries suggests that as m-banking takes off, volumes and ticket size can more than make up the difference.

Role for policymakers

Governments are increasingly seeing the convergence of banking and technology as an opportunity to expand access to finance. Five key issues arise on the regulatory side.

- Allowing nonbank agents, such as local stores, to offer “cash-in/cash-out” services to customers. Of the countries that permit the use of agents, an estimated 65 percent *permit agents to handle deposits*.
- Adopting a risk-based approach to anti-money laundering and countering terrorist financing rules. Many countries now allow agents to *perform customer screening*.
- Determining the *role of nonbank actors* in issuing e-money and processing electronic payments.
- Protecting consumers from new risks presented by *branchless banking* business models, and
- *Competition policies* that encourage innovation but protect against customer-unfriendly monopolies.

In country after country, technology is revolutionizing the way people can get basic financial services. Enabling all poor people to benefit from technology-enabled financial access will require work at many levels. But easy participation, soaring penetration, and irresistible economics have already ensured that the deployment of mobile telephony as a development aid is here to stay. ■

Olivier Lambert is Telecom Sector Leader of the World Bank Group's Multilateral Investment Guarantee Agency and Elizabeth Littlefield is Chief Executive Officer of the World Bank Group's Consultative Group to Assist the Poor.

References:

- Collins, Daryl, Jonathan Morduch, Stuart Rutherford, and Orlanda Ruthven, 2009, Portfolios of the Poor: How the World's Poor Live on \$2 a Day (Princeton, New Jersey: Princeton University Press).*
- International Telecommunication Union, www.itu.int*
- Wireless Intelligence, www.wirelessintelligence.com*
- World Bank, 2009a, Doing Business 2009 (Washington).*
- , *2009b, Information and Communication for Development 2009: Extending Reach and Increasing Impact (Washington).*

Delivering on *Change*

The IMF has created a new support framework for the world's low-income countries

Edward Gemayel and Samar Maziad

AS THE global financial crisis has swept from developed to developing countries, the IMF has undertaken an unprecedented reform of its policies toward low-income countries, culminating in the announcement of significant new resources underpinned by new lending instruments.

This wide-ranging effort has transformed the Fund's relationship with member countries that are striving to overcome the impact of a crisis not of their own making. The initiative reflects close consultation with low-income countries and responds to the call by the heads of state of the Group of Twenty (G-20) industrial and emerging market economies for swift policy action to meet the needs of the developing world.

The reform effort has sharply increased the financial resources available to low-income countries, overhauled the Fund's lending framework, streamlined loan conditionality, and reduced to zero the interest charges on concessional IMF loans for low-income countries through 2011, while permanently increasing concessionality of Fund lending to those countries.

Extensive support

Over the past two decades, low-income countries have made extensive use of the IMF's concessional facilities, and most have achieved marked improvements in macroeconomic performance and high rates of growth. In fact, of the 78 countries currently eligible for the Poverty Reduction and Growth Facility (PRGF), four-fifths have received Fund financing, and three-quarters have been supported under the PRGF or its predecessor. Over the period from 2000–07, low-income countries with sustained Fund engagement (of 10 years or more) witnessed high real GDP growth of 5.3 percent on average, supported by inflows of foreign direct investment of 4.2 percent of GDP and aid flows of 12 percent of GDP, while maintaining average inflation at 6.9 percent and average debt burden below 40 percent of GDP in 2007.

But the current global financial crisis is threatening to erode the hard-won gains of many low-income countries. This crisis, which originated in advanced economies and then spread to emerging countries, is now—through its third wave—threatening the remarkable economic achievements many low-income countries have made over the past decade. Earlier this year, an IMF study on the impact of the crisis on low-income countries warned that the financial crisis, combined with the sharp rise of food and fuel prices in 2008, had

created much higher financing needs, which if not met would push millions of people in low-income countries further into poverty. The international community, including the IMF, showed a strong commitment not to let that happen.

It is in that context that the IMF has revisited several aspects of its financial support to low-income countries, and in response, the IMF's Executive Board approved on July 23, 2009, a historic reform package to upgrade its concessional financial facilities for its low-income country members.

Delivering on promises

By adopting these measures, the IMF has transformed its relations with low-income countries and responded directly to an international consensus on how to respond to the global crisis. In March 2009, Tanzania's President Jakaya Kikwete and IMF Managing Director Dominique Strauss-Kahn convened a conference in Dar-es-Salaam to address these issues. The IMF committed at the meeting to increase its support for its low-income country members through more financing, greater flexibility, enhanced policy dialogue, and a further strengthening of the voice of low-income countries in the Fund. These commitments were conveyed to the G-20 London Summit in April 2009, where Strauss-Kahn also asked the donor countries to facilitate a major increase in the Fund's concessional lending. With the recent adoption of the comprehensive package of reforms, the IMF has delivered on these promises.

The reforms, which will make the Fund's lending instruments more flexible and tailored to the increasing diversity of low-income countries, centered on four pillars:

- increasing the resources available for low-income countries,
- improving financing terms and permanently increasing concessionality,
- reforming lending instruments for low-income countries and increasing their flexibility, and
- reinforcing the emphasis on poverty reduction and growth.

Significant scaling up of resources. In the months leading to the approval of the new architecture by the Executive Board, the IMF had already taken steps to substantially increase its assistance to low-income member countries. The IMF has agreed to increase its concessional resources by up to \$17 billion—some of it from the sale of IMF gold—between now and 2014. IMF

lending to low-income countries is expected to approach \$4 billion a year in 2009 and 2010, compared with \$1.2 billion in 2008, thereby exceeding the G-20 call for additional lending of \$6 billion over the next two to three years. For individual countries, the limit on the amount of financing they could obtain from the IMF on an annualized basis has been roughly doubled.

In addition, the Fund's membership has also backed a \$250 billion allocation of Special Drawing Rights (SDRs) that will be distributed to all member countries according to their quotas in the IMF. This would translate into an allocation of more than \$18 billion of SDRs to low-income countries to bolster their foreign exchange reserves and alleviate financing constraints.

However, for the IMF to meet the new financing commitments, additional loan resources of \$14 billion will need to be raised from existing and potential bilateral lenders. For that, a major fund-raising effort has been launched to mobilize the needed resources. In addition, new subsidy resources of \$2.8 billion will be mobilized from the IMF's internal resources—including the use of resources linked to the envisaged gold sales—and through bilateral contributions to help cover the cost of concessional interest rates.

New flexible facilities. The July Executive Board decision also reformed the structure of Fund facilities for low-income countries to increase their effectiveness, and to make the Fund's concessional lending instruments more flexible and tailored to the increasing diversity of its poorer member countries. These changes recognize that while many low-income countries will continue to require sustained program relationships with the IMF to address their economic challenges, an increasing number may need IMF financial support only during particularly difficult episodes (such as the current crisis), or may feel that it is prudent to prequalify for assistance now in case it is needed later. The new structure also establishes a single instrument that provides limited financing to countries facing a range of emergency situations, thus simplifying the Fund's toolkit and closing gaps that existed in the previous structure. These reforms stem primarily from listening to the Fund's low-income country membership and responding to their evolving and diverse needs.

This new structure, established within the Fund's newly created Poverty Reduction and Growth Trust (PRGT), consists of the following:

- The *Extended Credit Facility* (ECF), the successor to the PRGF, will allow the Fund to provide sustained program engagement and financing for countries facing protracted balance of payments difficulties.
- The *Stand-by Credit Facility* (SCF), which is similar to the Stand-By Arrangement (SBA) widely available to all IMF members, will provide financial assistance and policy support to low-income countries with shorter-term or episodic financing needs emanating from a range of sources. It also allows for precautionary use, in cases where there is a potential rather than an actual financing need.
- The *Rapid Credit Facility* (RCF) will provide a limited amount of financing in response to urgent needs, with

reduced conditionality. This is particularly useful when countries need financing only for a short time or when a country's capacity to implement policy is constrained.

In addition to these facilities, the *Policy Support Instrument* (PSI) will remain the Fund's nonfinancial policy support instrument for low-income countries, and can also facilitate access to the SCF and RCF, if needed.

Menu of options. These changes provide countries with a menu to choose the facility that best addresses their problems. For instance, Mozambique and Tanzania are two countries that had achieved macroeconomic stabilization and high growth under successive PRGF-supported programs. Both countries then shifted to a PSI to consolidate their economic progress without recourse to IMF financing. But when the global financial crisis hit, like many other countries, they turned to the IMF for financial assistance, through the Exogenous Shocks Facility. Under the new architecture, Mozambique and Tanzania would, for example, be able to tap the SCF under similar economic circumstances. In addition, they could also use it on a precautionary basis in case there is a possible—but not imminent—financial need.

Modern loan terms

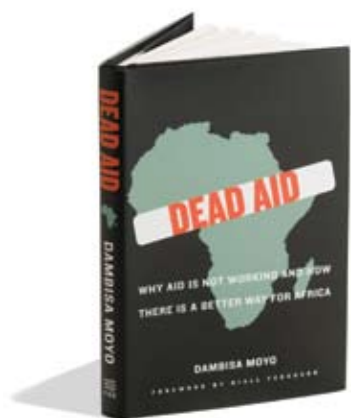
More flexible conditionality. These new facilities were preceded earlier this year by a decision by the IMF to introduce a more flexible approach to structural conditionality under all IMF-supported programs—one that focuses more on core goals, tailored to each country, while providing greater latitude on the needed policy measures.

Improving financing terms and concessionality. In response to the particularly serious economic dislocations resulting from the current crisis, low-income countries will also receive exceptional relief of all interest payments on outstanding concessional loans due to the IMF through the end of 2011—effectively, an interest rate of zero on these loans till end-2011. In addition, the interest rate on these three facilities will be reviewed regularly thereafter under a mechanism designed to offer higher concessionality than the IMF has provided in the past.

Renewed emphasis on poverty reduction. The new architecture, under its three facilities, will preserve the practice of putting strong emphasis on poverty alleviation and growth. Countries seeking IMF financial support should indicate how their economic policy program would advance poverty reduction and growth. Also, country-owned poverty reduction strategies will remain the basis of sustained program relationships with the IMF under the ECF. Wherever possible, programs will include specific targets to safeguard social and other priority spending. So far during the current crisis, IMF-supported programs have accommodated larger fiscal deficits in most low-income countries to help offset the adverse effects of the crisis. And many programs already include explicit targets for preserving or increasing social spending. ■

Edward Gemayel and Samar Maziad are Economists in the IMF's Strategy, Policy, and Review Department.

Thesis of a rigid revivalist



Dambisa Moyo

Dead Aid

Why Aid Is Not Working and How There Is a Better Way for Africa

Farrar, Straus and Giroux, New York, 2009, 188 pp., \$24.00 (paper).

DAMBISA Moyo's widely discussed attack on the aid system—contrary to what you may have heard—never says that all aid should end in five years. Moyo does pose a rhetorical question about the consequences of quickly cutting off all aid, but page 76 makes it clear what she actually recommends: much more focus on using aid to encourage non-aid mechanisms of finance, so that aid declines over time with the ultimate goal of “an aid-free world.”

To assess whether the book is convincing, we need to understand that it is not about how Africa should develop; it is about which mechanisms of *financing* lead to better development outcomes in Africa. Moyo defines aid as systematic cash transfers to governments, via grants or concessional loans—omitting humanitarian, emergency, and charity-based assistance directly to the needy. Her task is to show that aid thus defined cannot greatly expand economic opportunity for ordinary Africans, and that only a set of alternative development finance mechanisms would greatly expand economic opportunity for ordinary Africans.

I take three things away as I fin-

ish the book: its indictment of the aid system is its most convincing and least original contribution; its proposed alternative to the aid system is the most original and least convincing. For these two reasons the book's principal importance derives—appropriately—not from what is written therein, but from who wrote it. I will explain each of these points.

First, the book executes a stinging airstrike on several myths and profound flaws of the aid system. These accusations are generally accurate in some measure, well supported, and valuable. I'll list just a few. Donors never had much basis for applying lessons from the Marshall Plan's successes in reconstructing rich Europe to transforming a poor continent. Donors have frequently failed to contrive aid mechanisms that accurately and credibly punish failure in effective delivery, or reliably limit aid to corrupt regimes. The latest debt crisis was less a sign of donors' lack of the altruistic mettle to forgive debt than it was a sign that earlier rounds of debt forgiveness failed to touch the fundamental problem. Motivating aid through guilt and glamour is incompatible with fostering rigorous accountability for results. The aid industry has a clear incentive to portray Africa as helpless and needy, an image directly deleterious to efforts to attract private investment.

These missiles are, unfortunately, on target. They are not original, of course: these points have been made before and very well in widely read books, as Moyo points out, by the likes of Peter Bauer, William Easterly, Nicolas van de Walle, Eberhard Reusse, David Sogge, and many others. So their value here lies in loudly reminding the world that many issues often left out of polite conversation remain unresolved—and deserve fresh urgency.

Second, the book proposes four alternative ways to finance development in Africa. Here it becomes a fresh and provocative brainstorm. But the book stumbles as a policy blueprint because it does not come close

to offering sufficient evidence that the sweeping changes it recommends in finance mechanisms will greatly improve development outcomes. If it is right, it does not show that it is.

- Moyo suggests that more African countries and businesses should acquire bond ratings and tap private bond markets. Readers don't hear that many small and poor African countries—including Benin, Mali, and Malawi—already have sovereign ratings from Fitch or Standard & Poor's (ratings that were paid for by, ahem, donor agencies, as Todd Moss has observed). Furthermore, it is not well established that large waves of private capital are unleashed simply by the advent of a bond rating. Dilip Ratha's research has suggested that most of the variance in ratings for unrated countries can be easily predicted with existing, freely available information about those countries, so it is unclear that a rating itself tells investors a great deal that they don't already know. And one of the two successes the book showcases for successfully attracting large-scale bond finance—Gabon (p. 93)—unfortunately ranks at the bottom 12 percent of earth's nations for “control of corruption” according to the World Bank's *Governance Matters* project. This just doesn't fit the book's rigid thesis that “aid is the problem” and that other forms of finance solve “the problem.”

- *Dead Aid* praises the Chinese government for its promotion of foreign direct investment (FDI) in Africa, suggesting that other donors should follow suit but that their aid deters FDI. Readers would be right to reflect on Moyo's evidence that 78 percent of Tanzanians see China's influence as beneficial while just 36 percent see the United States this way. But all the laurels for China distract us by raising other questions: Why won't the large aid flows from China accompanying Chinese FDI do the same ostensible harm of other aid? And if Western aid has deterred Western FDI, why hasn't it deterred Chinese FDI? A better discussion would have focused on

what limited successes and major challenges have been met in the long experience of attempts to encourage FDI, such as those of the Multilateral Investment Guarantee Agency or the U.S. Overseas Private Investment Corporation.

- Moyo recommends that donor countries stop hurting African exports by, among other things, reducing their lavish subsidies on agricultural products like cotton and sugar. This is commendable, but the evidence is very weak that reducing remaining trade barriers will have a big bang in Africa. Nancy Birdsall, Dani Rodrik, and Arvind Subramanian have pointed out that the 1994 currency devaluation in 14 African countries—which immediately doubled the domestic value of all exports—accomplished little sustainable poverty reduction for West African cotton farmers.

- Finally, Moyo recommends mobilizing Africans’ own capital—such as by expanding microcredit and by making international workers’ remittances cheaper to send. These plausibly good financing ideas deserve more attention, but again it is unclear how much they can improve development outcomes. Jonathan Morduch and David Roodman have rigorously shown that despite the rock-star status of microcredit in development circles, evidence on the magnitude of its antipoverty effects remains oddly scarce. And shaving some percentage points off the cost of sending remittances will have limited effect on remittance flows until countries let more Africans move—such as if the Economic Community of West African States actually implements its *de jure* protocols for free labor mobility, or if rich donor countries expand opportunities for Africans to work there temporarily.

There are nevertheless bright spots in the book’s recommendations: more “collective bond” issues could raise capital for multiple small countries, while pooling risk and lowering transaction barriers, following South Africa’s new Pan-African Infrastructure Development Fund. Much more

attention should go to providing the basic infrastructure Africa requires for international integration, such as the construction and maintenance of key roads and power lines.

What these bright spots have in common is that they speak directly to sub-Saharan Africa’s fundamental development challenge: that an

“The book is weakened substantially by several statements much too strong for the evidence to justify.”

economy much smaller in dollar terms than that of the American city of Chicago has been shattered into 48 separate countries. Chicago’s economy would never overcome such a fate without bold financial and other mechanisms for its neighborhoods to work together. Collective bonds, roads, and migration work in this direction for Africa.

The book is weakened substantially by several statements much too strong for the evidence to justify. Its steely insistence that aid “guarantees economic failure” is difficult to reconcile with the fact that many African countries with well over 10 percent of GDP in aid have shown strong real growth over the past decade, including Ghana, Tanzania, Mali, Burkina Faso, Mozambique, and Uganda. As many reviewers have noted, the book needed a better fact checker and contains numerous unfortunate mistakes: It claims for example that “donors’ African aid purse is slowly shrinking,” whereas the Organization for Economic Cooperation and Development reports that aid flows to sub-Saharan Africa nearly doubled between 1997 and 2007, from \$32 billion to \$58 billion.

Third, despite its substantial limitations, one reason for which the book deserves attention is that it was written by an African. This observation is hard to debate—indeed, it is trumpeted in the first sentence

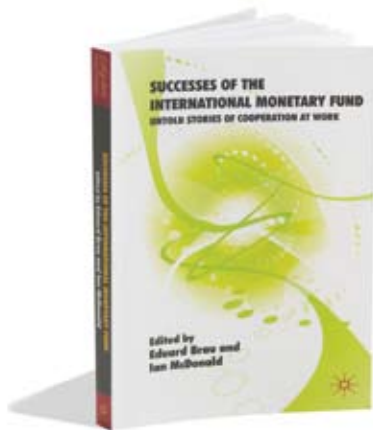
of the book’s own foreword by academic heavyweight Niall Ferguson. Like Kwame Nkrumah’s *Africa Must Unite* a half-century ago, *Dead Aid* profoundly and effectively indicts the failures of the current international system to promote development in Africa. Also like Nkrumah, Moyo channels a very real and widely held frustration among Africans about their treatment by the West even if she stumbles on the specific alternatives she proposes to the troubled policies of the past. But most important, Nkrumah’s and Moyo’s books remain valuable because they get the biggest picture right: African development is mostly in the hands of Africans, outsiders’ attempts to foster it face inherent limitations, and these observations are most persuasive when made by an African.

One of the most interesting issues the book raises, then, must be one that stands apart from how to finance African development: Why does the West see so few thoughtful, critical analyses of aid and development written and spoken by Africans? These most certainly exist—including work by Benno Ndulu, Agustin Fosu, Ngozi Okonjo-Iweala, Andrew Mwenda, and many others—but they are too few and they are not widely heard in the West. Perhaps demand is limited: Western agencies and editors prefer Western authors. Perhaps supply is limited: sharp Africans seeking the best careers hesitate to criticize donor agencies that will be their funders or clients. Perhaps there are many other reasons.

What is clear is that more African voices must be heard on these momentous issues. This year, the Hewlett and the Bill & Melinda Gates Foundations unveiled a large-scale program to support 24 policy think tanks throughout Africa—a major step forward in breaking down the barriers between Africans’ development ideas and the world. I hope that the critical thinking they cultivate will contribute to a greatly expanded role for Africans in this vital debate.

Michael A. Clemens
*Research Fellow
 Center for Global Development*

Low bar's tough patrons



Eduard Brau and Ian McDonald, editors

Successes of the International Monetary Fund

Untold Stories of Cooperation at Work

Palgrave Macmillan, New York, 2009, 231 pp., \$34.95 (paper).

THIS is an informative and useful collection of essays by International Monetary Fund (IMF) staff and associated commentators by interested observers. The collection provides more fodder for supporters of the IMF than for detractors either on the left, who argue that the IMF is too harsh in its policy prescriptions, or on the right, who argue that the IMF is too lenient or misguided in its policy prescriptions.

The book's six case studies of IMF financial assistance are of Korea 1998, Poland 1990–91, Turkey 2001–02, Tanzania 1995–2007, Brazil 2002, and Uruguay 2002–03. Each chapter includes a comment by someone who was either involved or a close observer of the program or activity. The commentaries add value, but they are not full-blown, objective critiques. In the interests of full disclosure, I was a participant in, or close observer of, four of the six country cases (excluding Tanzania and Uruguay) and all of the activities.

The principal value in these six essays is their focus on key decisions made by the authorities of the countries and the IMF. In five of the six

cases, the episode described came at the end of an often protracted and less-than-successful sequence of programs and interactions between the country and the IMF. The authors do not fully acknowledge this fact in every case. The principal exception is the Uruguay case, though the transition program for Poland might also qualify. I was also struck by an irony in the Tanzanian case study. The IMF is credited both for advancing \$400 million in financial support during 1995–2005 and for forgiving Tanzania's remaining debt to the Fund in 2006.

Three essays on other IMF activities are largely descriptive, which does not detract from their overall usefulness for those who did not live through or do not remember clearly the events of the 1990s. The essay on the IMF staff's *World Economic Outlooks* usefully provides a longer history starting in 1980. However, it is more self-congratulatory than the other essays and less convincing as a result. Taken as a group, the case studies illustrate the wide variety of economic, financial, and political issues that arise with programs that receive financial support from the IMF. A reader would be hard-pressed to sustain the view that the IMF uses a cookie cutter to design programs receiving Fund support.

The essays force the reader to think about the meaning of "success" for an IMF program. The editors define IMF success as making "a significant positive contribution," which is a relatively low bar, and also speculate about the counterfactual to IMF financial support. In the absence of such support, the immediate economic and financial consequences for the country, probably its neighbors, and possibly the world would have been more adverse. They raise the possibility that some countries alternatively might have received financial support from friends and allies, but without the policy reforms that produced overall success.

Implicit in the essays and commentaries, and occasionally explicit, is a second test of the IMF's success: could the policy advice from the IMF

have been better? In almost all cases, the answer is yes, as is often noted by the authors, notably in the Uruguay case, but that is too harsh a test for judging any crisis response.

The overwhelming message of these six case studies is the importance of "ownership." The program belonged to the authorities of the country, and they fought to shape and own its content. The exception to this pattern is Korea, where public opinion still views the episode as the "IMF crisis" not Korea's crisis. However, even in this case, until the new Korean government owned its program, financial authorities in other countries were unwilling to pour more financing through the IMF into Korea and out the back door to foreign creditors.

The book's message about the IMF in the current global economic and financial crisis, drawn in particular from the Brazilian and Uruguayan cases, is the importance of an IMF that is flexible, is prepared to take risks, and is equipped financially to respond on a scale appropriate to country needs and circumstances.

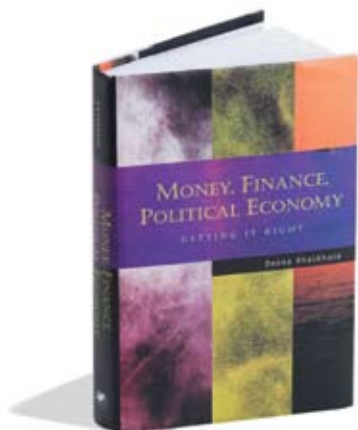
On IMF reform, messages in this volume are somewhat more discouraging. The half-essay by Tom Dawson reminds readers that the country members of the Fund control IMF transparency and accountability. For example, the members ultimately determine rules governing release of Executive Board documents as well as what the IMF publishes, in large part, about their countries. Similarly, Charles Enoch, in his half-essay on country transparency, notes that since the establishment of the Special Data Dissemination Standard in 1999, members have been reluctant to raise the bar further in this area.

On the whole, the authors may have pulled a few of their punches, but they provide the serious student of the evolution of the IMF with thoughtful insights into this central global institution.

Edwin M. Truman

Senior Fellow, Peterson Institute for International Economics

Ahead of his time



Deena Khatkhate

Money, Finance and Political Economy

Getting It Right

Academic Foundation, New Delhi, 2009, 385 pp., \$39.95 (cloth).

“LIFE is lived forwards but understood backwards,” wrote the philosopher Kierkegaard. This collection of a lifetime’s work of the Indian economist Deena Khatkhate can be understood as an act of rebellion against much of his intellectual inheritance: socialism and central planning, Keynesian macroeconomics, and an adversarial view of North-South relationships. Instead, these essays put forward a spirited (but not uncritical) defense of capitalism and markets, espouse a macroeconomics as much Friedmannite as Keynesian, and urge a constructive approach to relationships between developing and advanced nations.

The last of these themes is illustrated in arguably the best article in the collection, which is on the brain drain—the emigration of skilled workers from developing to advanced countries. In this article, published in *F&D* in 1971, Khatkhate challenged the prevalent view of the brain drain as an evil, a form of aid from the poor to the rich. He showed that because most emigration occurred from develop-

ing countries with a clear excess supply of skilled workers, it was actually a social safety valve for the poor countries. And because it encouraged the “cross fertilization of ideas” between skilled workers from the poor nations and the richer nations, the brain drain could be “a desirable investment.”

There are examples of this prediction coming to pass, such as the success of software exports from countries like India, Ireland, and Israel to more advanced nations. Ashish Arora, a professor at Carnegie Mellon University, has shown that this success is due in part to “the reserve army of underemployed engineers and scientists in these countries [that] had previously migrated to the United States and the United Kingdom.” Through their work abroad, this diaspora gained experience with the business practices of their future customers—an earlier brain drain had turned into a brain gain, as Khatkhate predicted.

Other essays on North-South relationships in the book include one on “conflict and cooperation in the international monetary system.” Written in 1987, it anticipates many reforms of the IMF and other international agencies—such as giving “greater voice” to the South in decision making—that have taken place or have come to the front of the agenda. To be sure, Khatkhate was one of many making similar suggestions. But, as he notes in the preface, he “received some flak” for this article since he was employed at the IMF at the time. In any event, Khatkhate soon left the IMF, after two decades of service, and went on to become editor of *World Development*, a scholarly journal.

Prior to joining the IMF, Khatkhate worked for over a decade—from 1955 to 1968—at the Reserve Bank of India, the country’s central bank. Not surprisingly, therefore, a second major theme of the essays is the role of macroeconomic and financial policies in promoting economic growth. In the 1950s, the Keynesian view advocated running fiscal deficits to promote growth in

developing countries. The rationale was that since there were underemployed resources in these economies, heavy government spending could lead to employment of those resources without triggering inflation. However, Khatkhate writes that

“These essays put forward a spirited (but not uncritical) defense of capitalism and markets.”

the negative evidence on the actual impact of government spending convinced him that “all that happened as a result of heavy resort to fiscal deficit was inflation, decline in income, saving and investment.” Khatkhate’s views on monetary policy also differed from the 1960s Keynesian view, emphasizing as they did the need for rules to guide the central bank rather than give it too much discretion.

A third theme is the rhetoric vs. the reality of socialism and central planning. Khatkhate blamed socialism for trying to deliver both growth and equity and delivering neither. The real problem in developing countries, he said, was not so much the skewed income distribution but “improving the standard of the whole mass of people, which is possible only with rapid economic growth.” These views were far from the mainstream when Khatkhate wrote them in 1978. He is not, however, an unvarying defender of capitalism and free markets. On the free mobility of capital, for instance, his views are close to that of his compatriot Jagdish Bhagwati in favoring a cautious approach, given the evidence that hasty liberalization can contribute to financial crises.

Charles Collyns and Prakash Loungani

Deputy Director and Advisor, respectively, Research Department, IMF



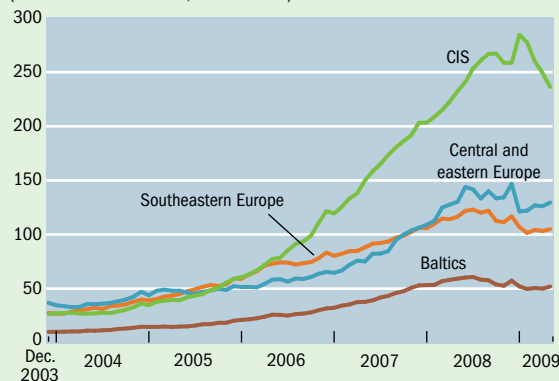
Flows to Eastern Europe

Foreign banks have supported eastern European banks, but the financial crisis has reversed this trend

FOREIGN (mostly western European) banks dominate the eastern European banking system. Overall financing from foreign sources for countries in eastern Europe increased from about \$96 billion in December 2003 to a peak of \$550 billion in September 2008. All four subregions—the Baltics, central and eastern Europe, the Commonwealth of Independent States (CIS), and southeastern Europe—showed a significant increase in their dependence on foreign banks, led by a ninefold jump in the CIS to \$280 billion. With the worsening of the global financial crisis in September 2008, this trend reversed for all groups.

Banks across eastern Europe have received large amounts of funds from foreign banks.

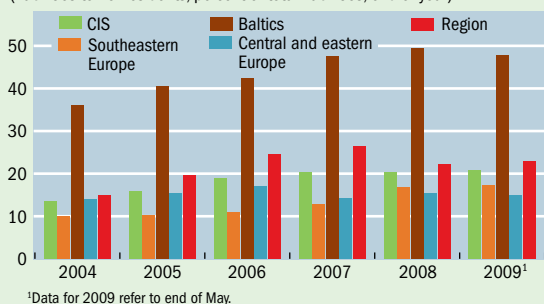
(liabilities to nonresidents, billion dollars)



Foreign liabilities rose, on average, as a ratio to total liabilities, from 12 percent to 19 percent for all countries. The highest foreign-bank dependence is found in the Baltic countries, with the ratio ranging from 33 percent in December 2003 to a peak of 50 percent in October 2008.

The Baltic countries have the highest foreign-bank dependence in the region.

(liabilities to nonresidents, percent of total liabilities, end of year)



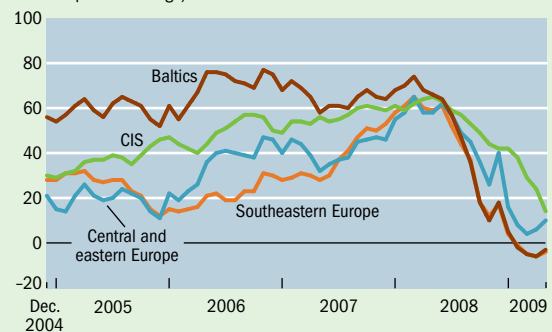
¹Data for 2009 refer to end of May.

This increase in foreign financing was paralleled by extremely high rates of credit growth, in both national and

foreign currency, to the private nonfinancial sector—mainly to nonfinancial corporations and households. However, the deterioration in the global financial environment since September 2008 brought about a rapid decline in the growth rate of credit, which actually has been negative since February 2009 for the Baltic and southeastern European countries.

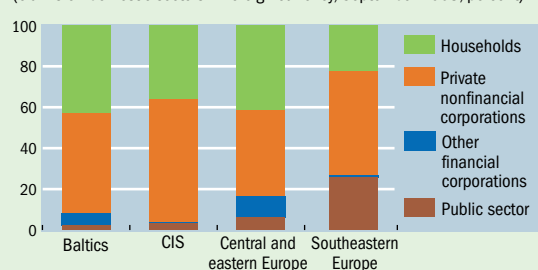
High rates of credit growth in foreign currency dropped sharply after the crisis.

(credit to private nonfinancial sector in foreign currency, annual percent change)



By crisis onset, firms and households were the largest recipients of foreign currency credit.

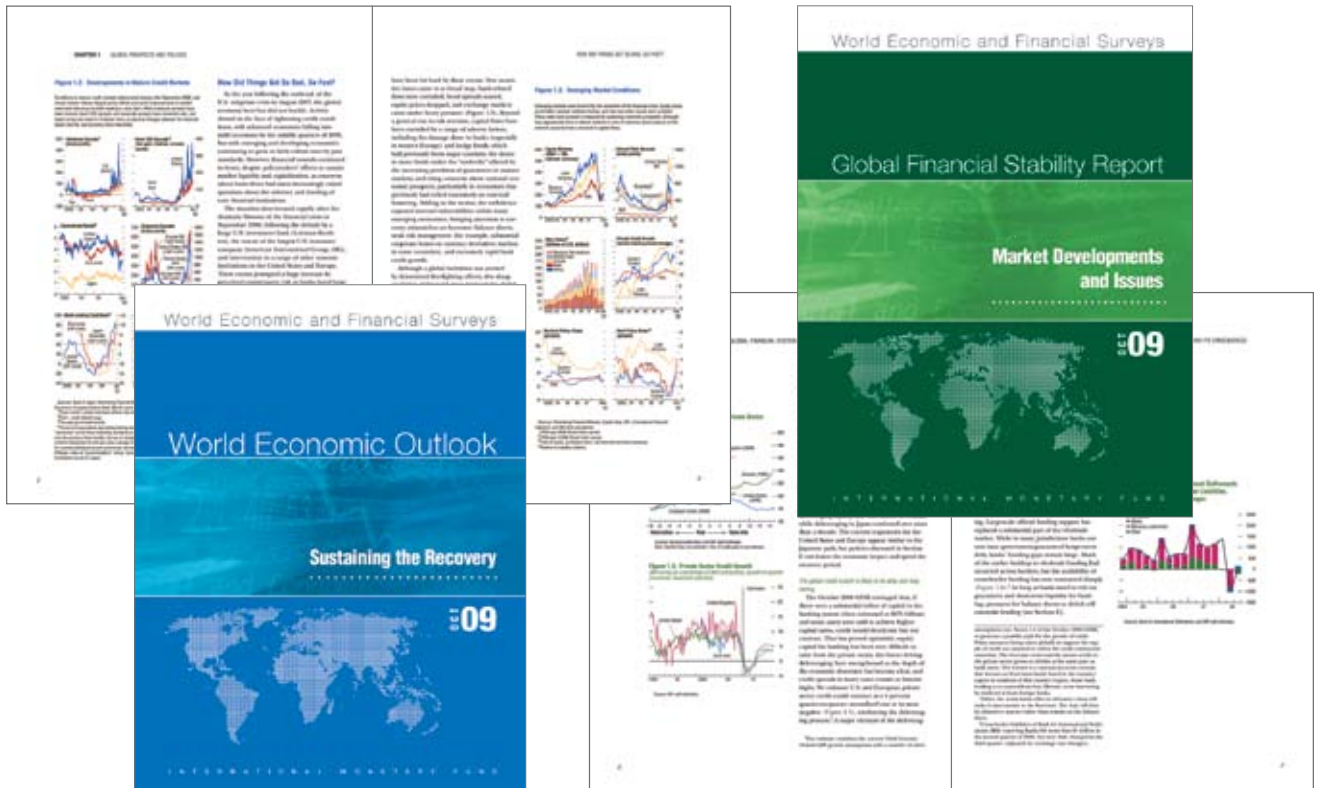
(claims on domestic sectors in foreign currency, September 2008, percent)



About the database

The data are derived from the standardized forms currently used by 114 countries to report monetary data to the Statistics Department of the IMF. Countries were arranged into four groups: CIS (Armenia, Azerbaijan, Belarus, Georgia, Moldova, Russia, and Ukraine); southeastern Europe (Albania; Croatia; Macedonia, FYR; Romania; Serbia; and Turkey); the Baltics (Estonia, Latvia, and Lithuania); and central and eastern Europe (Czech Republic, Hungary, Poland, and Slovak Republic). Most of the data used in this article can be accessed via International Financial Statistics Online at www.imfstatistics.org/imf/

Resolving Crisis, Building Recovery



Find out how.

Important questions deserve good answers.

The IMF's *Global Financial Stability Report* and *World Economic Outlook* provide the analysis and insights needed to help sustain the recovery and build a new financial landscape.

Subscribe today to these essential IMF publications at www.imfbookstore.org