



# Kenneth Rogoff

Fresh out of graduate school, Kenneth Rogoff went to work at the Federal Reserve Board in Washington, D.C. Within months, he had overturned conventional wisdom about the forecasting power of exchange rate models. “We find,” he wrote with Richard Meese, “that a random walk model would have predicted major-country exchange rates ... as well as any of our candidate models.” That finding still stands today.

Rogoff also examined central bank policymaking and produced theory which (joined with that of other scholars) provided the intellectual framework for redesign of the world’s central banks. Rogoff highlighted optimal commitment and reputation as institutional mechanisms to address the problem of time consistency.

After leaving the Board in 1984, he taught at a succession of the nation’s top schools—Harvard since 1999—and throughout this quarter century, his research has been at the cutting edge of international economics; this includes not only his continuing work on exchange rates and central banking, but also indispensable papers on economic development, sovereign debt, current accounts problems and the international coordination of monetary policy—not to mention an 832-page graduate textbook with Maurice Obstfeld.

But Rogoff is more than an intellectual powerhouse. As chief economist at the International Monetary Fund from 2001 to 2003, as adviser to the New York Fed and the Central Bank of Sweden, and as a member of the Trilateral Commission, the Council on Foreign Relations and the Group of Thirty, his influence on policy has been substantial.

Nonetheless, he is disturbed by much about recent policymaking—the refusal of U.S. leaders to heed lessons about current accounts deficits, for instance, or to notice warning signs of impending financial crisis. Despite that frustration, Rogoff remains optimistic about the future of economics scholarship. “The present financial crisis,” he predicts, “will have an effect on future research in macro and finance similar to the influence the Great Depression had on several generations of economists.”

## PROGRESS ON EXCHANGE RATE MODELS

**Region:** There's so much going on right now that the temptation is to focus on the financial crisis.

**Rogoff:** I think that it would be a mistake to focus too much on the very near term; things are moving so fast that anything we say now may soon seem stale!

**Region:** But it's the elephant in the room, so I'm sure it will influence our conversation. Still, you've done such important research that I really would like to start with that. One of your first papers, written in 1983 with Richard Meese, was on exchange rates.

**Rogoff:** Yes.

**Region:** And you found that economic models of that time could neither predict nor explain exchange rate movements any better than a random walk model could. Twenty-five years later, you've just published another paper with Vania Stavrakeva that reviewed current models and concluded, "The glass is 95 percent empty." What's behind that bleak assessment, and why has there been so little progress in building models of exchange rate movements?

**Rogoff:** If you ask what we actually do know about exchange rates, the most powerful empirical regularity, for sure, is that purchasing power parity has some traction in the long run. Mind you, we don't have very good measures of PPP. For one thing, for the most part, we only have long-term comprehensive data sets for indices, not levels of national prices. Since there is no way of telling if PPP holds in the base year (where, say, the indices are equal to 100), we are only able to tell if deviations from PPP have increased or decreased; we don't know the absolute level of the deviation (even setting aside that national consumption baskets differ). Nevertheless, under some plausible assumptions, one can still test



One major reason forecasting exchange rates is so hard is that the volatility is so great. But it is also true that we do not have very good models of liquidity and risk premia, which seem to be important drivers of short-term exchange rate fluctuations. The recent "anomalous" rise in the dollar during the peak of the financial crisis underscores this point.

whether there's a tendency toward mean reversion in a regression framework. The usual finding is that there is, but that it is very slow.

How slow? Well, there lies an exciting and interesting debate, with lots of technical issues. My read of the literature is that the half-life of PPP deviations is two to three years (so that over, say, 30 months, half of given deviation from PPP can be expected to damp out). So when the euro was at 1.60, for example, PPP told us that there was a good chance over the next few years that in real terms the euro would depreciate. (Albeit not nearly so fast as has happened in recent weeks!) And when the dollar/euro rate was at .83 in 2002, PPP told us there was a good chance that the euro would appreciate. That long-run finding has been established over hundreds of studies on exchange rates. However, over short horizons, Stavrakeva and I still find that PPP has essentially no power at one month to one quarter horizons.

**Region:** So it's in the short to medium term that it has no explanatory power.

**Rogoff:** Yes, short to medium term. And that was my result with Meese in our 1983 paper.

The current account is another variable that has some long-run power, although it's much less crisp theoretically and empirically than PPP. And if you're looking at countries that are at widely different levels of development, say, China versus the United States, the so-called Harrod-Balassa-Samuelson effect also comes into play. It says that if country A grows much faster than country B over a long period, its real exchange rate will tend to appreciate. Importantly, the HBS effect works through the way growth bids up wages. So until China has fully employed its huge reserve of surplus labor from the rural sector, HBS might not exert itself powerfully there.

But these are mostly longer-run effects. The short to medium run (say, up to one year) is still quite a challenge. I say that despite the fact that there really has been some important progress of late, including the interesting work of Ken West, Charles Engel, Nelson Mark, David Papell, Hélène Rey and Pierre-Olivier Gourinchas among others. Gourinchas and Rey's 2007 *Journal of Political Economy* paper seemed particularly promising; they use a function of the trade balance to predict trade-weighted U.S. exchange rate changes. Stavrakeva and I find that the model does particularly well from the 1990s on. Of course, as fate would have it, the recent extraordinary sharp rise in the dollar—coming after the publication of both these papers—goes in the opposite direction of the model's predictions, and we will have to see how robust it proves over a longer period.

How worried should we be about not being able to predict exchange rates? Some people say we can't predict stocks either. But exchange rates are not the same as stocks. If one country has 5 percent inflation and the other has 1 per-

cent inflation, we think we ought to be able to predict something. Similarly, if one country is having strong growth and another country isn't, it isn't just one model that predicts that the strong-growth country would appreciate; most models do.

Certainly one major reason forecasting exchange rates is so hard is that the volatility is so great. But it is also true that we do not have very good models of liquidity and risk premia, which seem to be important drivers of short-term exchange rate fluctuations. The recent "anomalous" rise in the dollar during the peak of the financial crisis underscores this point.

By the way, I cannot emphasize enough the point that uncertainty about equilibrium floating exchange rates probably underlies some of the instability we invariably see in *fixed* exchange rates. If it's unclear where the exchange rate will go when there's an attack on the fixed exchange rate, then it becomes unclear at what point there'll be pressures on the fixed exchange rate. If you have a high degree of uncertainty about the post-attack exchange rate, then it makes it very hard to predict the timing of the attack. Uncertainty about floating rates and the fragility of fixed exchange rates are two intimately linked problems.

So, yes, the glass is 95 percent empty, 5 percent full. But that is better than a decade ago. Maybe we'll get it up to 10 percent over the next five to 10 years.

## EXCHANGE RATE REGIMES AND ECONOMIC GROWTH

**Region:** Generally, since Baxter and Stockman's 1989 *Journal of Monetary Economics* paper, most economists have said that there's little relationship between the exchange rate regime a country chooses and its growth rate. But in recent research, you looked at productivity growth and found that there is a relationship in less financially developed countries. Would you tell us a bit about that and what lessons it offers to policymakers?



We find that less-developed countries do better with a relatively fixed exchange rate, and the richest countries do better with a floating exchange rate. ... But of course these results can't be viewed as definitive until there have been many more papers checking the result.

**Rogoff:** Well, let me step back and talk about regime classifications. The Baxter and Stockman paper is a brilliant paper, but it was based on what was available in its day in terms of classifying exchange rate regimes. That is, it used the official IMF classification. The historical IMF classification is very sterile because the IMF basically used to ask countries what their exchange rate regime was. The IMF then, in turn, simply reported the answers unquestioningly even though, as you can imagine, what many countries said had little to do with reality.

I did a paper with Carmen Reinhart of [the University of] Maryland that tried to look at *de facto* instead of *de jure* exchange rate regimes. Our paper found that, not surprisingly, many countries that say they're floating aren't. (Carmen had basically made this point across a narrower data set in an earlier 2002 paper with Guillermo Calvo with the great title "Fear of Floating.") A lot of Asian countries, for instance, were once in this camp; China used to officially report that its exchange rate regime was

a managed float. So did Saudi Arabia, even though its currency barely moved.

More surprising is the finding that a great many countries that say they have fixed exchange rates actually have a *de facto* float. That is because there have been many cases where a country effectively has multiple exchange rates, including an official one that might be fixed, but a parallel or black market exchange rate that might be floating. Often the parallel rate is the better barometer of monetary policy, as well as the relevant exchange rate for a significant portion of transactions. Of course, multiple rates can only persist in an environment of capital and exchange controls, but these have been quite common over modern history, including in Europe for the decades after World War II.

The remarkable bottom line from our paper was that, taking post-World War II history as a whole, the official classification was no better than random. There was about a 50 percent chance that if a country said its rate was fixed it really was flexible, and vice versa. This finding, of course, raises questions about a lot of the literature that has tried to look at the effect of exchange rate regimes, since the earlier papers were using what is basically a random classification of exchange rate regimes.

The question then is whether something would change if *de facto* exchange rates were used instead. I've looked at this in a couple of papers. One is with co-authors Aasim Husain and Ashoka Mody, and the other is with Philippe Aghion, Philippe Bacchetta and Romain Ranciere. In both papers, we find an effect of the exchange rate regime for less-developed countries. In particular, we find that less-developed countries do better with a relatively fixed exchange rate, and the richest countries do better with a floating exchange rate.

We did a myriad of robustness checks in both papers, but of course these results can't be viewed as definitive until there have been many more papers checking the result from other angles.

So far, the further results I have seen have been consistent with our findings, but it is early days. Certainly, the availability of new classification algorithms has made studying the effects of exchange rate regimes an exciting area of research.

## FINANCIAL GLOBALIZATION

**Region:** In the past 10 years, we've seen a lot of debate about the direct effects of financial globalization, about its costs and benefits—for example, whether the costs of contagion might overwhelm the benefits of capital inflows. In your work with other colleagues at the International Monetary Fund ...

**Rogoff:** Colleagues originally at the IMF, but they've filtered out into the world: Eswar Prasad, Ayhan Kose and Shang-Jin Wei. Shang-Jin Wei is now at Columbia, Eswar Prasad is now at Cornell and Ayhan Kose is still at the IMF. But we did start working together when we were all at the IMF.

**Region:** In the study I'm thinking of, you found that the indirect effects of financial globalization might be more important than the direct effects. Would you elaborate on that a bit?

**Rogoff:** The first thing to say about the financial globalization literature is that the scientific empirical work doesn't particularly support any polemic view of it. It's certainly not clear that the direct benefits are necessarily huge. Neither is it incredibly clear that it's the disaster some make it out to be. For the most part, the evidence is just too tepid to say anything.

The one area where people really find consistent positive results is equity market liberalization. Several researchers looking at equity liberalization—Bekaert and Harvey, Peter Henry and others—have arrived at that conclusion. More recently, Laura Alfaro and Eliza Hammel at Harvard find very strong growth effects, which are more convincing



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because they are using industry-level data. Using the Rajan-Zingales approach, they find that for industries where you would expect capital market liberalization to matter, it does.

The one thing that gives one pause about the positive equity market liberalization results is that for most developing countries, equity markets are small relative to debt markets—at least over most of the sample period. So what does it mean, exactly, that equity market liberalization produces such positive growth results? Certainly, it cannot simply be through the traditional channel of raising the quantity of investment.

The answer, perhaps, as Ayhan, Eswar, Shang-Jin and I argue, is that the equity market liberalization might work because it is a catalyst for improving governance and transparency, developing an SEC and the like. Having a stock market actually involves fairly sophisticated institutions. People need to be assured

that their money isn't going to be stolen when they invest in a company.

**Region:** So these are the indirect effects.

**Rogoff:** Yes, these are examples of the indirect effects.

By the same token, indirect effects may also be at work in cases where countries' capital market liberalization leads to disaster. Liberalization might, for example, allow the elite to steal more.

In any event, hard empirical evidence is very limited. In a more recent paper with Prasad, Kose and Wei, we try to explore the catalytic effects. There's some evidence that things could work in that direction. We find support across a number of dimensions for the importance of catalytic effects, but again it's not the kind of thing to stake your life on; it's suggestive. Overall, financial liberalization is probably not decisive in itself in determining a country's growth trajectory or its income volatility. But precisely because many governance and transparency issues are all so intertwined, it is absolutely wrong to conclude that countries should engage in financial market autarky. No rich country has chosen that course.

## THE IMF

**Region:** As former chief economist at the IMF, you're well aware of the criticism the Fund has been subjected to in past years. In 2004 in the *Economist*, you offered your own critique. But you've recently suggested that the IMF might provide valuable counsel to the United States in dealing with its current crisis. What resources does the IMF have to offer?

**Rogoff:** Well, look at what happened this past weekend at the October World Bank/IMF meetings. These meetings represented a major step toward international cooperation in dealing with the crisis, particularly the recognition that if one country casts a safety net under its

financial system, there are huge implications for other countries. We Americans, in this instance, were really forced to follow the Europeans, or we would have suffered huge capital flight.

Hopefully, the financial crisis will take some of the steam out of the financial triumphalism that has dominated some American economic policy (and altogether too much of the academic literature). We don't come close to having perfect capital markets, even if they are sometimes a convenient modeling tool. We don't have a perfect financial system, yet we depend on the rest of the world, which has roughly \$14 trillion invested here. Because we are so dependent on the rest of the world, we have strong incentives to be transparent.

The days when we can have our leading financial officials go around telling everyone our financial sector is beyond reproach are gone. Instead, we need to be more open and transparent and, importantly, more accepting of constructive criticism from around the world. The IMF is a natural vehicle for channeling this dialogue. And, of course, if we actually listened more seriously to the IMF's perspectives, it would be far easier for the IMF to gain traction in countries such as China, which would be very much in our interest.

Of course, the United States has always been very open to criticism and letting people sort of punch at it. But I don't think the United States has ever taken anything to heart in policy choices. There was a lot of criticism of the U.S. current account deficit during the early 2000s. Maury Obstfeld and I wrote a series of papers arguing that the global imbalances posed serious risk, particularly given the growing complexity of derivatives markets. We made this point in our very first paper, presented in the summer of 2000 at the well-known Kansas City Federal Reserve conference held each year in Jackson Hole, Wyoming. I followed through on this at an official level as chief economist at the IMF from 2001 to 2003, as did my successor Raghuram Rajan.



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Yet a sequence of Treasury secretaries and the Federal Reserve chairman just dismissed the concern. Alan Greenspan, following essentially exactly the same logic as in my work with Obstfeld, reached the conclusion that the U.S. current account deficit simply reflected greater financial globalization. Yet that was exactly the point of my earlier papers with Obstfeld; reasonably calibrated models suggested that the U.S. current account had become quantitatively too large, even taking into account growing financial globalization. (This was our "The Six Major Puzzles in International Macroeconomics: Is There a Common Cause?" paper, also published in 2000.)

You have to remember that the financial services sector lobby is *extremely* powerful in the United States, not only in Congress but in the media. Unfortunately, officials have not always counterbalanced them in an effective way.

**Region:** You're not implying regulatory capture, are you?

**Rogoff:** Oh, yes, there certainly was some regulatory capture here, at least cognitive regulatory capture of the type [London School of Economics' Willem] Buiter articulates. That is why even the United States can benefit from having a more serious dialogue with an international regulatory authority such as the IMF. Indeed, after the subprime financial crisis, and given our continuing dependence on savings from the rest of the world, I expect the United States will find it important to seek a more constructive engagement than it has in the past.

## CURRENT ACCOUNT DEFICITS AND THE DOLLAR

**Region:** The dollar is doing pretty well right now, regardless of our current account situation or our financial crisis. How do you explain that?

**Rogoff:** Well, I think the answer "it's very hard to explain exchange rates" trumps any other theory, of course [laughter]. Yet, as I have already argued, it has long been very clear that our current account was not sustainable. In his recent book, former Fed Chairman Alan Greenspan more or less dismisses the U.S. current account deficit as a very secondary problem. He is right in the sense that the current account depends ultimately on microeconomic decisions of millions of agents, so micro factors matter. But, sadly, he could not be more wrong to dismiss the fact that current account deficits are a key information signal of underlying imbalances that require adjustment.

As Carmen Reinhart and I show in a 2008 *American Economic Review* paper, the run-up to the U.S. subprime crisis had all the red lights blinking for a financial crisis (based on the standard literature and in comparison with the 18 other major financial crises suffered by industrialized countries since World



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War II). Yet, Fed and Treasury officials dismissed these signs, saying, “This time is different, we have financial globalization.” (Carmen and I find this hubris the most common recurrent theme in our forthcoming book on 800 years of financial crises.)

Of course, just because the current account is not sustainable does not mean it can easily be used to predict short-run exchange rate movements, especially since the exchange rate is a forward-looking variable and takes into account likely future real adjustments.

At the risk of falling into the trap of trying to explain short-term exchange rate movements (which we know to be perilous), I would venture this: Evidently, despite the fact that the United States messed up so badly, people became even more worried about the rest of the world. As the crisis fades, I would suspect the

dollar will give back some of its gains, at least against Asian currencies other than the yen (which has also strongly appreciated).

Certainly, it’ll be interesting to revisit all the regressions of what happened during this period.

### IS THIS TIME DIFFERENT?

**Region:** You mention that you and Reinhart are putting out a book on financial crises.

**Rogoff:** Yes, we’ve been working on it for five years, and we’re getting near the end, believe it or not. It’s called *This Time Is Different: Eight Centuries of Financial Folly*, published by Princeton University Press. It’s pretty much an academic book, built around a new database.

**Region:** You start, I believe, with England’s default on debt in the Middle Ages and work up to the current period. What can you tell us about the regularities that you found over those eight centuries and the lessons or forecasts that might provide for our current situation?

**Rogoff:** One thing that we find certainly is that virtually every country experiences serial default on external debt when going through the emerging-market stage of development. They default not just once but many times on external debt.

Another thing we find, less surprisingly, is that the same thing is true, more or less, for high inflation. It’s a matter of degree, and countries that were emerging markets in 1700 didn’t have the technology that those in 2000 did, but to the best of their abilities, they did the same thing. (By technology, I mean that before the printing press became widely used in the mid-1800s, governments had to resort to clipping coins, using inferior metals and otherwise debasing the currency to achieve inflation.)

Importantly, we do find that countries eventually graduate out of serial

default as they go on to become advanced economies. (I hope the United States does not default at the end of the current mess—as it last did in 1933 on the abrogation of the gold clause—or Carmen and I will have to rewrite our last chapter on graduation. Perhaps we will cover the 2013 U.S. default in the second edition!)

But it’s also important to note that, as the current episode illustrates, there are some kinds of crises that countries never graduate from. The degree and scope of banking crises are actually surprisingly similar across different levels of development and in many ways.

We also find that global factors are incredibly important in determining when countries default—the commodity price cycle and the interest rate cycle (for risky assets) have always been very important determinants of default. Unfortunately, those pressures are strongly exerting themselves across emerging markets as we speak, with the world going into what appears to be (at the time of our conversation) a significant global recession.

Another important result in our book is the finding that *domestic* debt markets have always played a very important role in determining whether countries default on their *external* debts. Actually, a major discovery in the book is a huge new data set on domestic debt, which had never previously been used in this literature. It might surprise you, but it is hard to find domestic debt data for any

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emerging-market country before 1990. (Bordo and Meissner, who present some data for 1880–1913, is an important exception.)

Evidently, a lot of economists had come to the conclusion that because domestic debt data did not seem to exist, then it must not have been all that important. And this applies not just to the literature on sovereign external default. Phillip Cagan’s classic 1956 study of hyperinflation, “The Monetary Dynamics of Hyperinflation,” makes no mention of that when, in fact, domestic debt was surely a big factor in many of the hyperinflations. Instead, he concludes that many countries seem to inflate an absurd amount, far beyond what might make sense looking at the monetary base alone. Well, that is because governments were not just looking at the monetary base. Thomas Sargent’s “The Ends of Four Big Inflations” (1982) does not factor in the overhang of domestic debt either. Reinhart and I argue that one of the main reasons big hyperinflations come to an end is that, after awhile, they have done their (dirty) work and there is much less point in continuing them.

I’ve already mentioned our May 2008 paper in the *American Economic Review* on the run-up to the U.S. financial crisis and comparing it with the run-up to financial crises in 18 other industrialized countries. That paper, written in December 2007, argued that if one compares the run-up to the 2007 U.S. financial crisis with previous major financial crises, we would be lucky to get off with just a mild recession.

## THE LONG-TERM CONSEQUENCES OF DEBT

**Region:** Well, let’s talk about the U.S. debt and its long-term consequences, in the context of the current economic crisis. The Stabilization Act authorizes \$700 billion, some of which will contribute to the growth of national debt. Economists such as NYU Professor Nouriel Roubini suggest \$2 trillion ...



The rising debt burden will have some effect on growth. But I’m more concerned about what happens to our financial sector at the end of this, what’s left of it. I just don’t know what’s going to emerge after the political system works it over. ... If we rebuild a very statist and inefficient financial sector—as I fear we will—it’s hard to imagine that growth won’t suffer for years.

**Rogoff:** I have, as well, suggested \$1 trillion to \$2 trillion.

**Region:** Yes, I think up to \$2 trillion “to fix the system” are your words.

**Rogoff:** That is because the bailout process is just at the beginning. Look at history. Carmen and I have a paper coming out—it’s another chapter from our book—looking at the aftermath of banking crises. We argue that it is highly misleading to look at reported *ex post* fiscal costs because these are subject to a great deal of accounting manipulation and typically do not reflect true economic costs. If, instead, one looks at things that are less manipulable, like the run-up in public debt, it’s clear that the costs of a financial crisis are just staggering.

For example, even though this interview won’t be published for a couple of months, I think it’s safe to say there’ll be

a huge stimulus package, some of it surely dissipative. We’ll probably bail out the mortgage holders before this is over, some large class of them. Auto companies, municipalities and so on.

Perhaps the costs will be less. But I doubt it.

**Region:** And the long-term growth consequences of that additional debt?

**Rogoff:** Fortunately, adding a trillion dollars in debt is quite manageable for the United States. Of course, it is not a fun way to spend money, bailing out the financial system. We’d rather spend it on health, education, infrastructure or the environment. (That is, if the expenditures are well crafted and packaged with policy changes and structural improvements.) The fact is that for all the railing against the Bush deficits, the United States grew decently until recently, so that our debt/GDP burden is still modest by European or Japanese standards.

The rising debt burden will have some effect on growth. But I’m more concerned about what happens to our financial sector at the end of this, what’s left of it. I just don’t know what’s going to emerge after the political system works it over. I hope that we do not throw out the baby with the bathwater. If we rebuild a very statist and inefficient financial sector—as I fear we will—it’s hard to imagine that growth won’t suffer for years.

Yes, the financial sector needs to shrink. In fact, there’s a nice 2007 paper by Thomas Philippon (at NYU) which actually forecast this happening. So some retrenchment is desirable. But I worry we are going to turn back the clock altogether too far. What are needed are (much) greater capital requirements and more transparency, not regulatory strangulation.

## ASSET PRICE VOLATILITY

**Region:** In a paper you delivered at Jackson Hole in 2006, “The Impact of Globalization on Monetary Policy,” you

raised many interesting issues, but one in particular that caught my attention was your discussion of the interplay between increasing volatility in asset prices and the so-called Great Moderation in volatility of macroeconomic fundamentals.

**Rogoff:** Right, I emphasized that there hadn't been a great moderation in asset prices and that people did not pay enough attention to this fact. Probably the first thing to say is that there is a whole industry about the Great Moderation and what caused it, and it is going to suffer as much as the financial industry! [laughter] There were obviously a lot of good ideas in the Great Moderation literature, but now people probably have to go back to the drawing board to understand what was going on.

We have seen that financial globalization (one of the heroes of the literature on the Great Moderation) may dampen volatility in normal times, but there may be rare events where it exacerbates volatility. Regulators need to decide how to strike a balance.

In an earlier Jackson Hole paper, I talked about how globalization made it easier to have low inflation simply because we had a very high growth period. For a number of reasons, it's easier for the central bank to be tough on inflation when it's delivering good news about growth. And in a period when growth is difficult, it's much harder to maintain that consensus.

## CENTRAL BANK INDEPENDENCE

**Region:** Some of your earliest papers were about the design of central banking, considering issues of time consistency and optimal commitment. Since that time, central banking has been redesigned according to some of those principles that you and other scholars suggested, including the key element of political independence. Do you have any concerns about the political consequences for central bank policy of taxpayer-funded bailouts?



People don't realize that part of the reason the Fed does things really well is because it's picked out a very clear theme, that it can be depoliticized to some extent. ... As the Fed is pushed to play a larger role in regulation, in particular, it is going to be harder to maintain its independence.

**Rogoff:** It's hard not to be concerned. My 1985 paper sort of put forth the idea of having central bank independence as an institutional vehicle to solve the time consistency problem posed by Kydland and Prescott, and Barro and Gordon. At the time, the idea of using institutions to resolve credibility problems met with quite a bit of resistance from the academic community, and it took several years to get the paper (written in 1982) published. That paper also introduced the idea of inflation targeting, although it was not until 10 years later that Carl Walsh (University of California, Santa Cruz) argued that optimal inflation contracts might simultaneously resolve both credibility and stabilization problems. I have always felt that "resolution" is a mirage and optimal inflation targeting is too fragile; the underlying institutions and the people who run them are the most important thing.

Nowadays central bank independence has been widely adopted around the world, and the main threat to the

institution is its own success. Politicians increasingly look at how successful central banks have been and say, "Well, gee, why don't we have them do everything? Why don't we have them run regulation? We wish they could run fiscal policy. Why don't we have them deliver the mail?" There's this incredible tendency to try to say that since the Fed does things really well, why don't we have it do everything?

Unfortunately, people don't realize that part of the reason the Fed does things really well is because it's picked out a very clear theme, that it can be depoliticized to some extent. The Fed has a relatively small but elite staff that is highly professional, very flexible and dynamic. If all of a sudden you burden the Fed with many other responsibilities, you introduce a plethora of administrative problems. It's a very different thing having a staff of 10,000 from having a staff of 2,000 or 3,000. It may sound the same, but it is absolutely not.

As the Fed is pushed to play a larger role in regulation, in particular, it is going to be harder to maintain its independence. If the Fed is going to be making decisions on individual banks, senators and representatives will call up and lobby shamelessly. It is not so easy to defray that.

Until 10 years ago, the governor of the central bank of China had almost 1 million employees; they've managed to divest some of them since. While we wouldn't get up to there proportionately in our economy, if you listen to some of the bills in the Senate and the House, it's almost as if they wish we could do that. That's clearly not a good path. The ideal plan would be to have better financial regulators throughout government, who have good communication with the Fed. But the Fed itself should not be doing everything.

I do think that some of the problems the IMF got into during the 1990s happened when the G7 decided that the World Bank had become thoroughly incompetent. (It has since been greatly reformed.) So the G7 said, "Why don't

we have the IMF do everything? Why don't we have the IMF do more in Africa? And why don't we have the IMF take the lead in regulation?" The IMF was sucked in, but it was a mistake for everybody. The IMF has its specialization, and other institutions such as the World Bank have their specializations. Pressing the IMF to do too many things was a mistake.

The right answer was to make the World Bank more effective, which today

it certainly is, certainly compared to 15 years ago. So in the United States, the right answer has to be mainly to develop an effective regulator in addition to the Fed, rather than bloat the Fed. But that regulator needs to develop its own top-level economics staff.

Let's look at England, as a good example of what can go wrong. The Financial Services Authority was separated from the Bank of England when Tony Blair first came to power 10 years

ago. The Northern Rock deposit run last summer makes this look like a fiasco. But what, really, is the problem with the FSA? The problem is that it is effectively run by lawyers and accountants, with too little access to good economic analysis. Now U.K. politicians are talking about bringing significant regulatory power back to the Bank of England. Some measure of recalibration may be appropriate, but the real issue is to improve the quality and depth of eco-

## More About Kenneth Rogoff

### Current Positions

Professor of Economics, Harvard University, since 1999

Thomas D. Cabot Professor of Public Policy, Harvard University, since 2004

Research Associate, National Bureau of Economic Research, since 1985

### Previous Positions

Director, Harvard Center for International Development, 2003–04

Chief Economist and Director of Research, International Monetary Fund, 2001–03

Professor of Economics and International Affairs, Princeton University, 1992–94; Charles and Marie Robertson Professor of International Affairs, 1995–99

Professor of Economics, University of California, Berkeley, 1989–91

Associate Professor of Economics, University of Wisconsin, Madison, 1985–88

Economist, International Finance Division, Board of Governors of the Federal Reserve System, 1980–83; Section Chief, Trade and Financial Studies Section, 1984

Economist, Research Department, International Monetary Fund, 1982–83

### Professional Activities

Member, Group of Thirty, since 2008

Vice President, American Economic Association, 2007

Member, Academic Advisory Panel, Central Bank of Sweden, since 2005

Member, Council on Foreign Relations, since 2004

Member, Economic Advisory Panel, Federal Reserve Bank of New York, since 2004

Member, Trilateral Commission, since 2003

Member, Advisory Committee, Institute for International Economics, since 2001

Honorary Adviser to the Bank of Japan, Institute for Monetary and Economic Studies, 2001

Member, Scientific Advisory Committee, Centre for Economic Policy Research, 2000–03

Member, National Science Foundation Advisory Panel on Economics, 1988–89

Advisory Board Member, *Journal of Economic Perspectives*, since 2005; Co-editor, *NBER Macroeconomics Annual*, since 2000; Panel Member, *Economic Policy*, 2002–03. Associate Editor: *Journal of International Economics*, since 1995; *Review of Economics and Statistics*, since 1993; *Economics Letters*, 1993–96; *Quarterly Journal of Economics*, 1984–95; *Journal of Economic Perspectives*, 1987–90

### Honors and Awards

American Academy of Arts and Sciences Fellow, 2001

World Economic Forum Fellow, 2003

Econometric Society Fellow, 1991

John Simon Guggenheim Fellow, 1998

German Marshall Foundation Fellow, 1991

Hoover Institution National Fellow, 1986

Alfred P. Sloan Research Fellow, 1986

National Science Fellowship, Massachusetts Institute of Technology, 1975–78

International Grandmaster of Chess, since 1978 (inactive)

### Publications

Published extensively in scholarly journals on topics in international finance, including exchange rates, debt issues and monetary policy; co-author, with Maurice Obstfeld, of *Foundations of International Macroeconomics*, 1996

### Education

Massachusetts Institute of Technology, Ph.D., economics, 1980

Yale University, B.A./M.A., *summa cum laude*, honors in economics, 1975

conomic analysis at the FSA.

I think if you look carefully at the problems in the United States—what is wrong with the SEC? Why do we have to take powers from the SEC and other agencies and try to channel everything to the Fed? It really comes down to needing better economic analysis. Now, that is not going to be easy, because federal government pay grades are absurdly low. But it is a much better solution than overextending the Fed.

## ADDRESSING MORAL HAZARD

**Region:** In a recent *Washington Post* column titled “No More Cream Puffs,” you praised the government for not bailing out Lehman Brothers. That column made clear the problems of moral hazard and the wisdom of resisting bailouts. Yet it’s also clear that there are issues of systemic risk and spillovers from institutions or banks that may be too big to fail. How would you address that paradox?

**Rogoff:** I’d first say that the financial system was falling under its own weight, and it had been propped up by the bubble. If you look at the stresses and the LIBOR and credit spreads, they were blowing up at the time of Lehman. If it wasn’t Lehman it would have been Merrill, and if it wasn’t Lehman or Merrill, it would have been someone else. The system was not sustainable. Like any overextended industry, it needed to shrink.

The financial services industry had been taking in 30 percent of corporate profits and 10 percent of wages despite representing only 8 percent of GDP (at its peak, and that is counting insurance). Why should a supposedly efficient financial system be soaking up so much of GDP? It is quite possible that a lot of what has happened to our overbloated financial system needed to happen anyway, albeit one would have expected the process to take five years instead of five days.

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In a few years even the existing financial institutions, the ones that have been saved, probably won’t look anything like they do now. Do we really want a financial system with a few big universal banks, riddled by internal conflicts and contradictions, and yet too big to fail? We have to rethink banking.

mistake made, the problem was not casting a very wide deposit insurance net early on.

My strong guess also is that Lehman’s leadership itself bears a heavy responsibility for what transpired. Lehman seemed to consistently be trying to drive a hard bargain, even as support for its equity faded. This dynamic seemed to occur again and again up until the last, last, last minute. Society cannot let itself get blackmailed by the financial system any more than by other large industries that seek side payments and protection.

**Region:** Without focusing on Lehman in particular, but from a more general pol-

icy standpoint, are there steps that can and should be taken to avoid moral hazard while containing spillovers?

**Rogoff:** Things have moved so far since then. I said then and still feel that the best outcome would have been to let market discipline take effect so that we didn’t have to regulate the system until no grass grows in the financial sector for 20 years. Unfortunately, we didn’t put in strong enough deposit insurance quickly enough after Lehman. The result was a good old-fashioned bank panic in the financial system. Now we have reached a point where we almost have to rebuild the whole thing from the ground up. I think that in a few years even the existing financial institutions, the ones that have been saved, probably won’t look anything like they do now. Do we really want a financial system with a few big universal banks, riddled by internal conflicts and contradictions, and yet too big to fail?

We have to rethink banking. Suppose you were putting your money in a bank, and it’s being insured up to a large amount by the government. Suppose then the bank is taking the money and putting it at the Federal Reserve and getting interest on it. This arrangement begs the question of what the bank exists for. Should the bank just be charging for markup services on checking? If the government is ultimately going to be the one providing liquidity services, should the whole structure be different than it is now?

I don’t know. I’ve taught for years in my class that many types of money funds and asset classes outside the traditional regulatory system are subject to the same kind of runs as the conventional banking system. I have had my classes write papers about whether the government can credibly promise *not* to bail out money funds, and if it cannot, then should they be subject to more regulation? This is not a simple question, but researchers need to provide better answers. I would venture that the present financial crisis will have an effect on

the future research in macro and finance similar to the influence the Great Depression had on several generations of economists.

Macro and finance have been dominated by the perfect markets paradigm because it's very convenient, and we got a lot of nice results and it's been constructive. But I think the advocates of that approach have all too often argued, "Well, OK, we know markets aren't perfect, but it's hard to do better than this in a constructive way. Besides, whatever we're missing maybe isn't *so* important."

But for many policy issues and especially for monetary policy, one cannot work only with models featuring perfect financial markets. Consider the fact that a lot of the inflation targeting literature employs models with perfect financial markets. So it's not exactly amazing that scholars wedded to this approach find that there is never a good case for looking at housing prices, above and beyond their effects on output and inflation. Yet empirical researchers have long argued that there is considerable danger whenever asset price inflations are accompanied by sharp rises in indebtedness. The doctrinaire inflation targeters dismissed this perspective, but hopefully they are rethinking things now. This is another reason why optimal inflation targeting models are simply too fragile.

No doubt, young economists will figure out better models for monetary policy. Of course, we already have models embodying financial market imperfections. For example, we have a lot of such models in international finance, including especially the literature on sovereign debt and default. Unfortunately, they can be very tough to work with practically and do not lend themselves to the same kind of flexible empirical analysis as the standard New Keynesian models (with perfect financial markets) now widely in use.

Fortunately, the financial crisis is going to stimulate a lot of further research seeking better practical monetary policy models. Happily, at the same time as the financial crisis has confront-

ed us with fascinating new problems, it will encourage a lot of talented young students to go into economics research instead of the investment banking sector, where they might have gone until recently [laughter].

**Region:** Thank you very much. **R**

—*Douglas Clement*  
Oct. 15, 2008