

whether we are winners or losers. Everyone is an expert on pensions, stocks, retirement packages, vacation deals, credit card scams, and more. Meanwhile, as Paul Krugman has written, this discipline, especially macroeconomics, has lost much of its capacity to analyze, define, or repair the huge mess we are in.

The gradual transformation of the imagined reader or viewer into a business junkie is a relatively new disease of advanced capitalism in the United States. The avalanche of business knowledge and information dropping on the American middle class ought to have helped us predict—or avoid—the recent economic meltdown, based on crazy credit schemes, vulgar scams, and lousy regulation. Instead it has made us business junkies, ready to be led like sheep to our own slaughter by Wall Street, the big banks, and corrupt politicians. The growing hegemony of business news and knowledge in the popular media over the past few decades has produced a collective silence of the lambs. It is time for a bleat or two.

Causes of Financial Crises Past and Present: The Role of the This-Time-Is-Different Syndrome

Carmen M. Reinhart and Kenneth S. Rogoff

Carmen M. Reinhart is the Dennis Weatherstone Senior Fellow at the Peterson Institute for International Economics and a research associate at the National Bureau of Economic Research and the Centre for Economic Policy Research. Kenneth S. Rogoff is the Thomas D. Cabot Professor of Public Policy and professor of economics at Harvard University and a research associate at the National Bureau of Economic Research. They are the authors of *This Time Is Different: Eight Centuries of Financial Folly* (2009).

There is nothing new except what is forgotten.

—Rose Bertin

The financial press has often characterized the 2007–2008 United States subprime mess as a new breed of crisis. Indeed, this view often points to the international repercussions of the U.S.-based crisis as evidence that the globalization of financial portfolios has introduced new channels for spillovers that were never present before. In light of the unfolding Greek tragedy, there is also considerable confusion in academic and policy circles as to whether the shaky predicament of the global economy stems from new forms of contagion channels or shared (common) economic fundamentals.

In this essay, we attempt to place the question of “how we got here” in the context of an international and historical comparative setting. It is of some poignancy that the “we” here refers to the wealthiest economies in the world, which, as late as 2006, had been enjoying the benefits of the so-called Great Moderation. The Great Moderation was a term used to describe (and extrapolate from) the drop in macroeconomic volatility that the advanced economies experienced starting in the late 1980s. A considerable majority of economists and policymakers held that the business cycle had been “tamed” thanks to better monetary and fiscal policy, deeper and more sophisticated financial markets, and a laundry list of other factors, including greater geopolitical stability. Few macroeconomists took seriously the possibility that a deep financial crisis might soon slam the United States and Europe, at least not without an unforeseen catastrophe of biblical proportions. As for a sovereign default in a euro-zone country, “orderly” or not, that was simply inconceivable. Never mind the glaring imbalances in the global economy that a small number of worrywart economists emphasized. “This time is different” yet again. And of course it was not.

Our approach does not dwell on (no doubt) important idiosyncratic features of the unfolding crisis in each of the advanced economies. Instead, we will focus on those factors that are common to great crises across time and geography; there is little doubt the recent and still ongoing crisis will be considered one of the greatest. In what follows, we will discriminate between root causes of the crisis, its symptoms, and features such as financial regulation, which serve as amplifiers of the boom-bust cycle. Pertinent to the financial globalization era that has unfolded since the 1980s, our discussion begins with the link between financial liberalization (internal and external), the financial innovation and credit booms these spawn, and

banking crises. This is a “nutshell” version of the analysis of banking crises found in our book *This Time Is Different: Eight Centuries of Financial Folly*.

The setting. Across countries and over the centuries, economic crises of all types follow a similar pattern. An innovation emerges. Sometimes it is a new tool of science and industry, such as the diving bell, the steam engine, or the radio. Sometimes it is a tool of financial engineering, such as the joint-stock company, junk bonds, or collateralized debt obligations. Financial innovations in particular often accompany, or are a direct result of, financial liberalization. Investors may be wary at first, but once they see that these new instruments appear to offer extraordinary returns, they rush in. Financial intermediaries—banks and investment companies—stretch their balance sheets so as not to be left out. As borrowing swells, the upward surge in asset prices continues, and a new generation of financial market participants concludes that rules have been rewritten: risk has been tamed, and leverage (borrowing to buy assets such as houses and stocks) is always rewarded. All too often, policymakers assert that the asset-price boom is a vote of confidence for their regime—that “this time is different.” Only seldom, to our knowledge, do they protest that perhaps the world has not changed, that the old rules of valuation still apply, and that investors should be far more cautious about debt.

But, eventually, the old rules *do* apply, and with a vengeance. The asset price rise peters out, sometimes from exhaustion on its own or sometimes because of a real shock to the economy. This exposes the weaknesses of the balance sheets of those who justified high leverage by the expectation of outsized capital gains. Many financial firms admit losses, and some ultimately fail. All those financial firms hunker down, constricting credit availability in an effort to slim their balance sheets. With

wealth lower and credit harder to get, economic activity typically contracts. Only after the losses are flushed out of the financial system, often with the encouragement of lagging monetary and fiscal ease, does the economy recover.

BOX 1. THE THIS-TIME-IS-DIFFERENT SYNDROME

The essence of the this-time-is-different syndrome is simple. It is rooted in the firmly held belief that financial crises are something that happens to other people in other countries at other times; crises do not happen here and now to us. We are doing things better, we are smarter, we have learned from past mistakes. The old rules of valuation no longer apply. The current boom, unlike the many booms that preceded catastrophic collapses in the past (even in our country), is built on sound fundamentals, structural reforms, technological innovation, and good policy. Or so the story goes.

For anyone needing an example of the timelessness of the collective self-delusion encapsulated in the this-time-is-different syndrome, please consult box 2.

The roots of financial crises. There is a striking correlation between freer capital mobility and the incidence of banking crises, as shown in figure 1. Periods of high international capital mobility have repeatedly produced international banking crises, not only famously, as they did in the 1990s, but historically. The figure plots a three-year moving average of the share of all countries experiencing banking crises on the right scale. On the left scale, we graph the index of capital mobility, following Maurice Obstfeld and Alan Taylor's *Global Capital Markets*,

Box 2. THE THIS-TIME-IS-DIFFERENT SYNDROME ON THE EVE OF THE CRASH OF 1929

**FAMOUS WRONG GUESSES
IN HISTORY**

when all Europe guessed wrong

The date—October 3rd, 1719.
The scene—Hotel de Nevers, Paris.
A wild mob—fighting to be heard.
"Fifty shares!" "I'll take two hundred!" "Five hundred!" "A thousand here!" "Ten thousand!"

Shrill cries of women. Hoarse shouts of men. Speculators all—exchanging their gold and jewels or a lifetime's meager savings for magic shares in John Law's Mississippi

Company. Shares that were to make them rich overnight.

Then the bubble burst. Down—down went the shares. Facing utter ruin, the frenzied populace tried to "sell". Panic-stricken mobs stormed the *Banque Royale*. No use! The bank's coffers were empty. John Law had fled. The great Mississippi Company and its promise of wealth had become but a wretched memory.

Today you need not guess.

HISTORY sometimes repeats itself—but not invariably. In 1719 there was practically no way of finding out the facts about the Mississippi venture. How different the position of the investor in 1929!

Today, it is inexcusable to buy a "bubble"—inexcusable because unnecessary. For now every investor—whether his capital consists of a few thousands or mounts into the millions—has at his disposal facilities for obtaining the facts. Facts which—as far as is humanly possible—eliminate the hazards of speculation and substitute in their place sound principles of investment.



STANDARD STATISTICS

200 VARICK ST.

New York, New York (now the home of Chipotle Mexican Grill)

Saturday Evening Post, September 14, 1929

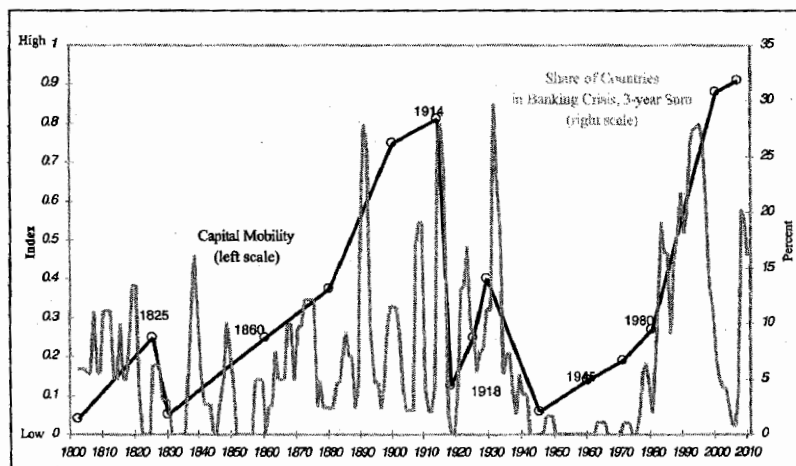
This advertisement was kindly sent to the authors by Professor Peter Lindert.

Source: Reinhart and Rogoff (2009).

updated and backcast using their same design principle, to cover our full sample period. While the Obstfeld-Taylor index may have its limitations, we feel it nevertheless provides a concise summary of complicated forces by emphasizing de facto capital mobility based on actual flows.

For the post-1970 period, Graciela L. Kaminsky and Reinhart's "The Twin Crises" presents formal evidence of the links of crises with financial liberalization. In eighteen of the twenty-six banking crises they study, the financial sector had been liberalized within the preceding five years, usually less. In the 1980s and 1990s most liberalization episodes were associated with financial crises of varying severity. Only in a handful of countries (for instance, Canada) did financial sector liberalization proceed smoothly. Specifically, the paper presents evidence that the probability of a banking crisis conditional on financial liberalization having taken place is higher than the unconditional probability of a banking crisis. Americans may remember the savings and loan crisis of the early 1980s, which followed on the heels of a massive liberalization of financial markets in the late 1970s and early 1980s, some elements of

**Figure 1. Capital Mobility and the Incidence of Banking Crises:
All Countries, 1800–2010**



Sources: Updated from Reinhart and Rogoff (2009) and sources cited therein.

Notes: This sample includes all countries. On the left scale, we updated our favorite index of capital mobility, admittedly arbitrary, but a concise summary of complicated forces. The smooth dark line shows the judgmental index of the extent of capital mobility given by Obstfeld and Taylor (2004), backcast from 1800 to 1859.

which were driven more by political expediency than economic logic.

The symptoms of financial crises. The recurring historical pattern described above is associated with some well-defined symptoms. In table 1, we focus on a few quantitative parallels that have been widely present during the current crisis and that were seen systematically in numerous earlier crises in advanced and emerging market economies alike. Specifically, large capital inflows and sharp housing and equity price run-ups top the "leading indicator" group. So do surges in private domestic and external debts. Although it can be very difficult to call the exact timing of a crisis—partly because so much depends on fragile confidence and partly because key vulnerabilities are often hidden by creative accounting—countries experiencing these quantifiable symptoms over a sufficiently long period are highly vulnerable.

**Table 1. Quantitative Antecedents of Financial Crises:
The "Lead" of the Leading Indicators**

Large capital inflows
 Sharp run-ups in equity prices
 Sharp run-ups in housing prices
 Inverted V-shaped growth trajectory
 Marked rise in indebtedness

If we were to quantify periods of capital flow bonanzas—periods during which capital inflows are unusually large—who comes up on the radar screen before the 2007–2009 crisis? As Carmen M. Reinhart and Vincent R. Reinhart document in "Capital Flow Bonanzas," in addition to the United States and the United Kingdom, the other countries listed there—Spain, Italy, Iceland, Ireland—are all countries that have undergone a period during which the large capital inflows ended badly.

Capital inflows facilitate domestic lending and fuel asset price inflation and in most instances increase the indebtedness of the private sector, the public sector (if the government behaves procyclically), or both.

Table 2. Capital Inflows Typically Surge Ahead of Financial Crisis

| Countries with recent notable capital inflows | 2006 | 2007 | 2008 |
|---|------|------|------|
| Bulgaria | ✓ | ✓ | ✓ |
| Iceland | ✓ | ✓ | ✓ |
| Italy | ✓ | ✓ | ✓ |
| Jamaica | ✓ | ✓ | ✓ |
| Latvia | ✓ | ✓ | ✓ |
| New Zealand | ✓ | ✓ | ✓ |
| Pakistan | ✓ | ✓ | ✓ |
| Romania | ✓ | ✓ | ✓ |
| Slovenia | ✓ | ✓ | ✓ |
| South Africa | ✓ | ✓ | ✓ |
| Spain | ✓ | ✓ | ✓ |
| Turkey | ✓ | ✓ | ✓ |
| United Kingdom | ✓ | ✓ | ✓ |
| United States | ✓ | ✓ | ✓ |

Source: Reinhart and Reinhart (2009).

Capital inflows (see table 2) are, of course, the mirror image of sustained current account deficits that rightly concerned many economists from the early 2000s onward, including Obstfeld and Rogoff, and Nouriel Roubini and Brad Setser, among others. But the idea that capital inflows might be problematic was dismissed by many analysts and policymakers, particularly in the United States, because “this time is different.” After all, booming emerging-markets countries required someplace safe to park their savings, and what could be the harm in that? The idea that these huge capital surges might distort asset prices and encourage dangerously lax regulation,

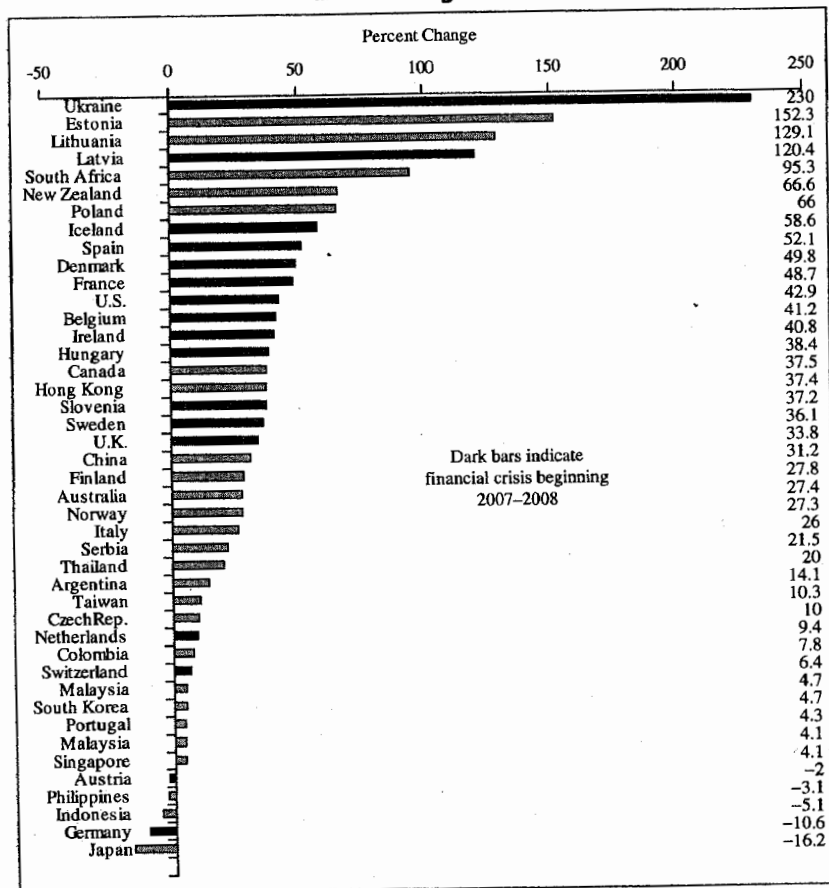
even in a relatively well-managed economy like the United States, was dismissed as hysterical. “This time is different.”

Similarly, it is surprising how many contemporary observers believed the U.S. housing price bubble of 2000–2006 to be both unique and unprecedented. The magnitude of the bubble was certainly unprecedented for the United States—at least during the past century for which we have comparable data. However, in a broader global context, the subprime housing bubble experience is not unique to the United States (as figure 2 highlights); nor is its magnitudes out of line with other real estate bubbles that have ended, equally lamentably, in financial crises (dark bars in figure 2). Taken together, our remarks on capital flows and housing bubbles suggest that the simultaneous timing of the recent crises owes a great deal to common vulnerabilities in the fundamentals rather than contagion.

The boom in real housing prices (or real estate, and other asset prices, more broadly) is fueled by ample domestic credit availability, large capital inflows, and the easy liquidity environment that facilitates the boom. Couple the ample liquidity environment with the presumptions that this time is different and that the old rules of valuation do not apply, and you’ve got the makings of or the ingredients for a crisis.

As to growth, investors and policymakers typically become inebriated with the boom that precedes the crisis, not fully appreciating how much it is amplified by easy credit and growing wealth as asset prices. Unfortunately, once growth begins to fall, as it eventually must, the whole dynamic implodes on itself. We have described the “inverted V” pattern of growth that characterizes a crisis (listed in table 1), a cruel parody of the famous V-shape recoveries that characterize normal business cycles, where the deeper the fall in output, the sharper the postrecession recovery.

Figure 2. Percent Change in Real Housing Prices (2002–2006) and Banking Crisis



Source: Reinhart and Rogoff (2009).

The importance of the last entry in table 1, a marked rise in indebtedness, cannot be stressed enough. Rising indebtedness can be domestic, external, or both. It can be private, public, or both. Any combination of these forms of rising indebtedness has been a hallmark of the pre-crisis period as far back as our data can take us. Perhaps Iceland illustrates this point in its most extreme form, as external debts rose from about 90 percent of gross domestic product in 2000 to well over 900 percent of GDP

in 2009. The overall debt matters greatly also, of course, but sharp, sustained borrowing booms are particularly worrisome because the rapid changes are so often accompanied by softer regulation and ever-weaker bank lending standards in a dynamic that is all too familiar to those who have just lived through the recent crisis.

The “amplifiers” of financial crises. In table 3, we list a variety of “usual suspects” that amplify crises, often making them far worse than they have to be, even given other vulnerabilities. These range from procyclical macroeconomic policies to overvalued currencies to myopic rating agencies. Despite its breadth, the list is not meant to be exhaustive. Nevertheless, it has withstood the test of time. Countless case studies of banking crises across countries and time list these same factors on a recurring basis, and these amplifiers are sometimes blamed as underlying causes of the crises. However, it is our view that these factors are better viewed as exacerbating both the boom and bust phases of the crisis cycle. For example, Gerald Caprio Jr. and Daniela Klingebiel’s evidence in “Bank Insolvency” suggests that inadequate regulation and lack of supervision at the time of the liberalization may play a key role in explaining why deregulation and banking crises are so closely entwined. But it is difficult to explain a cycle with a structural flaw that is a constant. In a great many countries, especially emerging markets, supervision has always been lacking and regulations perennially ill-defined. But such deficiencies may have limited consequences when credit conditions are tight (or, in the case of emerging markets, when access to international capital markets is extremely limited). If, on the other hand, financial liberalization (domestic and/or external) creates lending possibilities that did not exist before, then inadequate supervision can make a bad lending scenario worse. Outright fraud (often through

connected lending), which crops up as another hardy perennial in studies of the run-up to crises, works the same way.

The procyclicality of credit ratings, both at the sovereign and corporate levels, also acts to amplify the cycle of lending and subsequent default and crash. Credit agencies all too often are as blinded by the boom as regulators and investors, keeping countries on pedestals even as risks peak. Overvalued currencies are another magnet for capital inflows, while procyclical fiscal policies add to the surge in borrowing during the boom phase of the cycle. Governments all too often believe the boom will go on forever and sharply raise spending instead of using surging tax coffers to reduce public debt burdens.

Far from being mutually exclusive, many, if not most, of the items listed in table 3 are present simultaneously in the most severe financial crises throughout history.

Table 3. Amplifiers of Boom-Bust Cycles: The Usual Suspects

| |
|------------------------------------|
| Procyclical macroeconomic policies |
| Hidden debts (implicit guarantees) |
| Overvalued currencies |
| Poor regulation |
| Even worse supervision |
| Outright fraud |
| Myopic credit rating agencies |

Where we are: the sequencing of crises. Just as financial crises have common macroeconomic antecedents in asset prices, economic activity, external indicators, and so on, so common patterns appear in the sequencing (temporal order) in which crises unfold. Obviously not all crises escalate to the extreme outcome of a sovereign default. Yet advanced economies have not been exempt from their share of currency crashes, bouts of inflation, severe banking crises, and, in an earlier era, sovereign default. The long debt cycle we have discussed does not necessarily

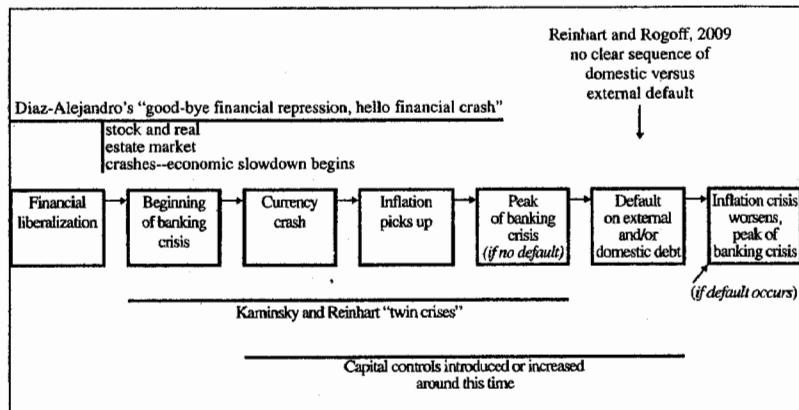
come to an end with a banking crisis. Unfortunately, more bad news usually follows—a stylized fact that should be kept in mind when trying to make sense of the current conjuncture.

Investigating what came first, banking or currency crises, was a central theme of Kaminsky and Reinhart’s “Twin Crises”; they also concluded that financial liberalization often preceded banking crises and, indeed, helped predict them. Asli Demirgüç-Kunt and Enrica Detragiache, who employed a different approach and a larger sample, arrived at the same conclusion in “The Determinants of Banking Crises in Developing and Developed Countries.” In 2002 Reinhart examined the currency crash–external default link. Our work here has investigated the connections between domestic and external debt crises, inflation crises and default (domestic or external), and banking crises and external default. Figure 3 maps out a “prototypical” sequence of events yielded by this literature.

As Carlos Diaz-Alejandro recounts in his classic paper about the Chilean experience of the late 1970s and early 1980s, “Good-bye Financial Repression, Hello Financial Crash,” financial liberalization simultaneously facilitates banks’ access to external credit and more risky lending practices at home. After a while, following a boom in lending and asset prices, weaknesses in bank balance sheets appear and problems in the banking sector begin. Often these problems are more advanced in the shakier institutions (such as finance companies) than in the major banks.

The next stage in the crisis sees the central bank beginning to provide support for these institutions by extending credit to them. If the exchange rate is heavily managed (it does not need to be explicitly pegged), a policy inconsistency arises between supporting the exchange rate and acting as lender of last resort to troubled institutions. Experience suggests that, more often than not, the exchange rate objective is subjugated to the

Figure 3. The Sequencing of Crises: A Prototype



Source: Reinhart and Rogoff (2009) and sources cited therein.

lender-of-last-resort role of the central bank. Even if central bank lending to the troubled financial industry is limited in scope, the central bank may be more reluctant to engage in an “interest rate defense” policy to defend the currency than would be the case if the financial sector were sound. This brings the sequence illustrated in figure 3 to the box labeled “Currency crash.”

The depreciation or devaluation, as the case may be, complicates the situation in at least three dimensions: (a) it exacerbates the problem of the banks that have borrowed in a foreign currency, worsening currency mismatches; (b) inflation usually worsens (the extent to which the currency crisis translates into higher inflation is highly uneven across countries, since those with a history of very high and chronic inflation usually have a much higher and faster pass-through from exchange rates to prices); and (c) if the government has foreign currency denominated debt, the currency depreciation increases the odds of an external and domestic default.

At this stage, the banking crisis either peaks following the

currency crash, if there is no sovereign credit crisis, or keeps getting worse as the crisis mounts and the economy marches toward a sovereign default (as in figure 3).

Of course, the alert reader will recognize one departure from the pattern in figure 3 in the current crisis. At the peak of the crisis, the U.S. dollar actually appreciated rather than depreciated. The answer, of course, is that figure 3 describes a typical country or regional crisis. But the recent financial crisis was global in nature; the U.S. subprime crisis infected the entire global economy. It is not mathematically possible for *all* currencies to depreciate at the same time. One currency’s fall has to be reflected in a corresponding *rise* in the value of at least some other currencies. In the recent episode, many countries at the epicenter of the crisis, including the United Kingdom and Iceland, experienced large depreciations. And a euro-zone country such as Spain could not see its currency collapse despite a severe banking crisis and housing price collapse because the value of its currency was tied to larger neighbors, such as Germany, that were in less dire straits.

Despite not being a perfect parallel because currency depreciation is a zero-sum game in a global crisis, there is no reason to assume that the other features of the pattern in figure 3 will not hold true. Notice especially in figure 3 that sovereign debt defaults typically unfold in the latter stages of the crisis. The series of events that began to play out in the summer of 2007 with the onset of the subprime crisis are still unfolding as the crisis morphs. This episode is not yet over.