

REFLECTIONS ON EARLY WARNINGS, GRADUATION, POLICY RESPONSES, AND THE FOIBLES OF HUMAN NATURE

We have come to the end of a long journey that has taken us from the debt defaults and debasements of preindustrial Europe to the first global financial crisis of the twenty-first century—the Second Great Contraction. What has our quantitative tour of this history revealed that might help us mitigate financial crises in the future? In chapter 13, on the run-up to the 2007 subprime financial crisis, we argued that it would be helpful to keep track of some basic macroeconomic series on housing prices and debt and calibrate them against historical benchmarks taken from past deep financial crises. But can one say more? In this chapter we begin by briefly reviewing the nascent “early crisis warning system” literature. We acknowledge that it can claim only modest success to date, but based on the first results here, we would argue that there is tremendous scope to strengthen macroprudential supervision by improving the reporting of current data and by investing in the development of long-dated time series (our basic approach here) so as to gain more perspective on patterns and statistical regularities in the data.

For starters, cross-country data on debt that covers long spans of time would be particularly useful. Ideally, one would have decades or even centuries of data in order to perform statistical analysis. We have taken a significant step here by exploiting previously little-known data on public debt for more than sixty countries for nearly one hundred years (and in some cases longer). But for most countries our long-dated time series includes only central government debt, not state and provincial debt. It would be helpful to have broader measures that take into account the debt of quasi-state com-

panies and implicit debt guarantees. It would also be extremely helpful to have long-dated time series on consumer, bank, and corporate debt. We recognize that gathering such information will be very difficult for most countries, but it is our firm belief that much more can be done than has been accomplished to date. And whereas the housing price series used here (in chapters 10, 13, 14, and 16) is a considerable improvement over earlier studies in making use of a broad range of countries, including emerging markets, it would be very useful to expand the data to include more countries and a longer time period.

The second section of this concluding chapter explores the potential role of multilateral financial institutions such as the International Monetary Fund in helping to gather and monitor data on domestic public debt, housing prices, and other matters. It is utterly remarkable that as of this writing no international agency with global reach is providing these data or pressuring member states to provide it. We argue that even with better data on risks, it would probably be extremely desirable to create a new independent international institution to help develop and enforce international financial regulations. Our argument rests not only on the need to better coordinate rules across countries but also on the need for regulators to be more independent of national political pressures.

In the third section of the chapter we revisit the theme of "graduation" that comes up again and again throughout the book. How can emerging markets graduate from a history of serial default on sovereign debt and from recurrent bouts of high inflation? A central conclusion is that graduation is a very slow process, and congratulations are all too often premature.

We conclude the chapter with a range of broader lessons.

On Early Warnings of Crises

In earlier chapters we described some of the characteristic antecedents of banking crises and links between various types of crises (for instance, between banking and external debt crises or between

inflation and debt crises). It is beyond the scope of this book to engage in a full-fledged analysis of early warning systems to anticipate the onset of banking, currency, or debt crises. Following the famous Mexican crisis of 1994–1995 and the even better-known Asian crisis of 1997–1998, a sizable body of empirical literature emerged representing an attempt to ascertain the relative merits of various macroeconomic and financial indicators in accurately "signaling" a crisis ahead of time.¹ These works reviewed a large body of indicators and adopted a broad array of econometric strategies and crisis episodes, with some modest success. Notably, as we have already discussed, the early literature had to be built on the very limited databases then available, which lacked key time series for many countries. In particular, data on real estate markets, a critical element of many bubble and overleverage episodes, are simply absent from most of the existing crisis warning literature because until now these data were not adequate.

Because the data set underlying the present book encompasses the prerequisite information on residential housing prices for a large number of advanced economies and emerging markets, spanning nearly all regions, we can now focus on filling in this important gap in the early warnings literature.² Our exercise, as regards housing prices, is not meant to be definitive. Specifically, we followed the approach proposed by Kaminsky and Reinhart in several of their contributions, the so-called signals approach, to examine where in the pecking order of indicators housing prices fit.³ Table 17.1 presents some of the highlights of the signals approach exercise for banking and currency crises. We did not revisit, update, or enlarge the sample of crisis episodes with regard to the other indicators. Our contribution is to compare the performance of housing prices to that of the other indicators commonly found in this literature.

For banking crises, real housing prices are nearly at the top of the list of reliable indicators, surpassing the current account balance and real stock prices by producing fewer false alarms. Monitoring developments in the prices of this asset has clear value added for helping us to anticipate potential banking crisis scenarios. For predicting currency crashes, the link with the real estate price cycle is

TABLE 17.1
Early warning indicators of banking and currency crises: A summary

Indicator rank (best to worst)	Description	Frequency
<i>Banking crises</i>		
Real exchange rate	Deviations from trend	Monthly
Real housing prices ^a	Twelve-month (or annual) percentage change	Monthly, quarterly, annually (depending on country)
Short-term capital inflows/GDP	In percentage points	Annually
Current account balance/investment	In percentage points	Annually
Real stock prices	Twelve-month percentage change	Monthly
<i>Forst</i>		
<i>Institutional Investor</i> (II) and Moody's sovereign ratings	Change in index	Biannually (II), monthly (Moody's)
Terms of trade	Twelve-month percentage change	Monthly
<i>currency crashes</i>		
Real exchange rate	Deviations from trend	Monthly
Banking crisis	Dichotomous variable	Monthly or annually
Current account balance/GDP	In percentage points	Annually
Real stock prices	Twelve-month percentage change	Monthly
Exports	Twelve-month percentage change	Monthly
M2 (broad money) / international reserves	Twelve-month percentage change	Monthly
<i>Forst</i>		
<i>Institutional Investor</i> (II) and Moody's sovereign ratings	Change in index	Biannually (II), monthly (Moody's)
Domestic-foreign interest differential (lending rate) ^b	In percentage points	Monthly

Sources: Kaminsky, Lizondo, and Reinhart (1998), Kaminsky and Reinhart (1999), Goldstein, Kaminsky, and Reinhart (2000), and the authors' calculations.

^aThis is the "novel" variable introduced here.

^bThis is not to be confused with a domestic-foreign interest rate differential such as that seen in the emerging Market Bond Index spread.

not as sharp, and housing prices do not score as well as a proxy of overvaluation of the real exchange rate as does a banking crisis or the performance of the current account and exports.

The signals approach (or most alternative methods) will not pinpoint the exact date on which a bubble will burst or provide an obvious indication of the severity of the looming crisis. What this systematic exercise can deliver is valuable information as to whether an economy is showing one or more of the classic symptoms that emerge before a severe financial illness develops. The most significant hurdle in establishing an effective and credible early warning system, however, is not the design of a systematic framework that is capable of producing relatively reliable signals of distress from the various indicators in a timely manner. The greatest barrier to success is the well-entrenched tendency of policy makers and market participants to treat the signals as irrelevant archaic residuals of an outdated framework, assuming that old rules of valuation no longer apply. If the past we have studied in this book is any guide, these signals will be dismissed more often than not. That is why we also need to think about improving institutions.

The Role of International Institutions

International institutions can play an important role in reducing risk, first by promoting transparency in reporting data and second by enforcing regulations related to leverage.

It would also be extremely helpful to have better and clearer information on government debt and implicit government debt guarantees in addition to more transparent data on bank balance sheets. Greater transparency in accounting would not solve all problems, but it would certainly help. In enforcing transparency, there is a huge role for international institutions—institutions that have otherwise foundered for the past two decades seeking their place in the international order. For governments, the International Monetary Fund (IMF) could provide a public good by having an extremely rigorous

standard for government debt accounting that included implicit guarantees and off-balance sheet items.

The IMF's 1996 initiative, the *Special Data Dissemination Standard*, provides a major first step, but much more can be done in this regard. One has only to look at how opaque the United States government's books have become during the 2007 financial crisis to see how helpful an outside standard would be. (The Federal Reserve alone has taken trillions of dollars of difficult-to-price private assets onto its books, but during the depths of the crisis it refused to disclose the composition of some of these assets even to the U.S. Congress. This assumption of assets was admittedly an extraordinarily delicate and sensitive operation, yet over the long run systematic transparency has to be the right approach.) The task of enforcing transparency is far more easily said than done, for governments have many incentives to obfuscate their books. But if the rules are written from outside and in advance of the next crisis, failing to follow the rules might be seen as a signal that would enforce good behavior. In our view, the IMF can play a more useful role by prodding governments into being forthcoming about their borrowing positions than it can by serving as a firefighter once governments have already gotten into trouble. Of course, the lesson of history is that the IMF's influence before a crisis is small relative to its role during a crisis.

We also strongly believe that there is an important role for an international financial regulatory institution. First, cross-border flows of capital continue to proliferate, often seeking light regulation as much as high rates of return. In order to have meaningful regulatory control over modern international financial behemoths, it is important to have some measure of coordination in financial regulation. Equally important, an international financial regulator can potentially provide some degree of political insulation from legislators who relentlessly lobby domestic regulators to ease up on regulatory rule and enforcement. Given that the special qualifications needed to staff such an institution are extremely different from those prevalent in any of the current major multilateral lending institutions, we believe an entirely new institution is needed.⁴

Graduation

Our analysis of the history of various types of financial crises raises many important questions (and provides considerably fewer answers). Possibly the most direct set of questions has to do with the theme of "graduation," a concept that was first introduced in our joint work with Savastano and that we have repeatedly emphasized throughout this book.⁵ Why is it that some countries, such as France and Spain, managed to emerge from centuries of serial default on sovereign debt and eventually stopped defaulting, at least in a narrow technical sense? There is the prerequisite issue of what exactly is meant by graduation. The transition from "emerging market" to "advanced economy" status does not come with a diploma or a well-defined set of criteria to mark the upgrade. As Qian and Reinhart highlight, graduation can be defined as the attainment and subsequent maintenance of international investment-grade status; the emphasis here is on the maintenance part.⁶ Another way of describing this criterion for graduation would be to say that the country has significantly and credibly reduced its chances of defaulting on its sovereign debt obligations. If it ever was a serial defaulter, it no longer is, and investors recognize it as such. Gaining access to capital markets is no longer a stop-and-go process. Graduation may also be defined as the achievement of some minimum threshold in terms of income per capita, a significant reduction in macroeconomic volatility, and the capacity to conduct countercyclical fiscal and monetary policies or, at a minimum, move away from the destabilizing procyclical policies that plague most emerging markets.⁷ Obviously, these milestones are not unrelated.

If graduation were taken to mean total avoidance of financial crises of any kind, we would be left with no graduating class. As we have noted earlier, countries may "graduate" from serial default on sovereign debt and recurrent episodes of very high inflation, as the cases of Austria, France, Spain, and others illustrate. History tells us, however, that graduation from recurrent banking and financial crises is much more elusive. And it should not have taken the 2007 financial crisis to remind us. As noted in chapter 10, out of the sixty-six

countries in our core sample, only a few had escaped banking crises since 1945, and by 2008 only one remained. Graduation from currency crashes also seems elusive. Even in the context of floating exchange rates, in which concerted speculative attacks on a peg are no longer an issue, the currencies of advanced economies do crash (i.e., experience depreciations in excess of 15 percent). Admittedly, whereas countries do not outgrow exchange rate volatility, those with more developed capital markets and more explicitly flexible exchange rate systems may be better able to weather currency crashes.

Once we adopt a definition of graduation that focuses on the terms on which countries can access international capital markets, the question that follows is how to make this concept operational. In other words, how do we develop a "quantitative" working measure of graduation? A solid definition of graduation should not be unduly influenced by "market sentiment." In the run-up to major crises in Mexico (1994), Korea (1997), and Argentina (2001), these countries had all been widely portrayed by the multilateral organizations and the financial markets as poster children for—sterling examples of—graduation.

Tackling this complex issue is beyond the scope of our endeavors here. Our aim is to provide a brief snapshot of what "debtors' club" (as defined in chapter 2) countries belong to and a "big picture" of how perceptions of the chances of sovereign default have changed during the past thirty years. To this end, table 17.2 lists all the countries in our sample (and their respective dates of independence). The third column presents the *Institutional Investor* sovereign ratings for sixty-two of the sixty-six countries in our sample for which ratings are available. It is safe to assume that with the notable exceptions of Hong Kong and Taiwan, all the countries that are not rated fall into club C (countries permanently shut out of international private capital markets). The next column shows the changes in the ratings from 1979 (the first year during which *Institutional Investor* published the results of their biannual survey of market participants) to March 2008.

Candidates for graduation should not only meet the criteria for "club A," with an *Institutional Investor* rating of 68 or higher, but should also show the "right slope." Specifically, these countries should

TABLE 17.2

Institutional Investor ratings of sixty-six countries: Upgrade or demotion, 1979–2008

Country	Year of independence (if after 1800)	<i>Institutional Investor</i> rating, 2008 (March)	Change in rating from 1979 to 2008 (+ indicates improvement)
Africa			
Algeria	1962	54.7	-3.9
Angola	1975	n.a.	
Central African Republic	1960	n.a.	
Côte d'Ivoire	1960	19.5	-28.7
Egypt	1831	50.7	16.8
Kenya	1963	29.8	-15.8
Mauritius*	1968	56.3	38.3
Morocco	1956	55.1	9.6
Nigeria	1960	38.3	-15.8
South Africa	1910	65.8	3.8
Tunisia	1957	61.3	11.3
Zambia	1964	n.a.	
Zimbabwe	1965	5.8	-18.0
Asia			
China		76.5	5.4
Hong Kong*		n.a.	
India	1947	62.7	8.5
Indonesia	1949	48.7	-5.0
Japan		91.4	-5.5
Korea*	1945	79.9	8.7
Malaysia*	1957	72.9	2.6
Myanmar	1948	n.a.	
The Philippines	1947	49.7	4.0
Singapore*	1965	93.1	14.2
Taiwan*	1949	n.a.	
Thailand*		63.1	8.4
Europe			
Austria		94.6	8.9
Belgium*	1830	91.5	5.7
Denmark*		94.7	19.4
Finland*	1917	94.9	20.0
France	943	94.1	3.0
Germany		94.8	-3.5
Greece	1829	81.3	18.7
Hungary	1918	66.8	4.2

(continued)

TABLE 17.2 Continued

Country	Year of independence (if after 1800)	Institutional Investor rating, 2008 (March)	Change in rating from 1979 to 2008 (+ indicates improvement)
<i>Europe (continued)</i>			
Italy		84.1	10.3
The Netherlands*		95.0	5.3
Norway*	1905	95.9	7.0
Poland	1918	73.0	23.5
Portugal		84.8	32.8
Romania	1878	58.4	3.6
Russia		69.4	-9.4
Spain		89.6	19.3
Sweden		94.8	10.6
Turkey		52.0	37.2
United Kingdom*		94.0	3.4
<i>Latin America</i>			
Argentina	1816	41.9	-20.5
Bolivia	1825	30.3	-1.3
Brazil	1822	60.6	4.3
Chile	1818	77.4	23.2
Colombia	1819	54.7	-6.0
Costa Rica	1821	52.3	7.6
Dominican Republic	1845	36.1	-0.3
Ecuador	1830	30.9	-22.3
El Salvador	1821	46.6	33.7
Guatemala	1821	41.3	19.7
Honduras	1821	31.5	12.4
Mexico	1821	69.3	-2.5
Nicaragua	1821	19.3	8.9
Panama	1903	57.1	11.6
Paraguay	1811	29.7	-13.7
Peru	1821	57.7	27.0
Uruguay	1811	48.8	7.8
Venezuela	1830	43.1	-29.3
<i>North America</i>			
Canada*	1867	94.6	1.1
United States*		93.8	-5.1
<i>Oceania</i>			
Australia*	1901	91.2	3.5
New Zealand*	1907	88.2	10.0

Sources: *Institutional Investor* (various years), the authors' calculations, and Qian and Reinhart (2009). Notes: An asterisk (*) denotes no history of sovereign external default or rescheduling; n.a., not available.

show an overall improvement in their ratings from thirty years ago. Countries like Turkey have shown a substantial improvement in their ratings over time, but their current status still falls below the threshold of club A—advanced economy status. Others, such as Mexico on the basis of its 2008 score, meet club A criteria but have seen a deterioration in their rating from what it was in 1979. Figure 17.1 plots the change in the *Institutional Investor* ratings (the last column of table 17.2) and highlights the countries with the potential for graduation. These include Chile, China, Greece, Korea, and Portugal (Malaysia and Poland are more borderline cases whose most recent ratings are just below the threshold for club A). Absent from this list are African countries and practically all of Latin America. This exercise is meant to be illustrative rather than definitive, for the question of who graduates from “emerging market or developing” status and why should remain at the forefront of development economics.

Some Observations on Policy Responses

The persistent and recurrent nature of the this-time-is-different syndrome is itself suggestive that we are not dealing with a challenge that can be overcome in a straightforward way. In its different guises, this syndrome has surfaced at one time or another in every region. No country, irrespective of its global importance, appears immune to it. The fading memories of borrowers and lenders, policy makers and academics, and the public at large do not seem to improve over time, so the policy lessons on how to “avoid” the next blow-up are at best limited. Danger signals emanating from even a well-grounded early warning system may be dismissed on the grounds that the old rules of valuation no longer apply and that the “Lucas critique” is on our side. (The Lucas critique, named for Robert Lucas, known for his work on macroeconomic policy making, says that it is naive to try to predict the effects of a change in economic policy entirely on the basis of relationships observed in historical data, especially highly aggregated historical data.)

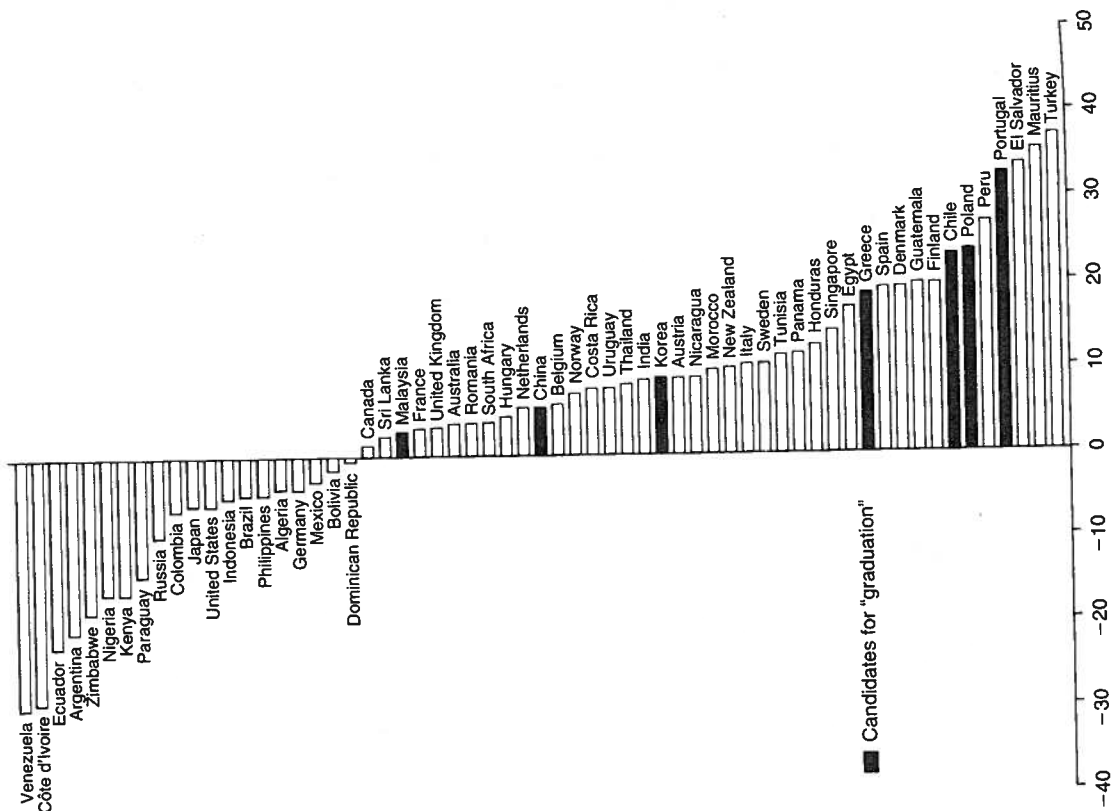


Figure 17.1. Change in Institutional Investor sovereign credit ratings of sixty-six countries, 1979–2008.

Sources: Qian and Reinhart (2009) and sources cited therein.

Note: Malaysia and Poland are included as graduation candidates, but these are “borderline” cases.

Even if crises are inevitable, there must at least be some basic insights that we can gather from such an extensive review of financial folly. We have already discussed the importance of developing better time series data for studying the history of financial crises, the central premise of this book. In what follows we highlight some further insights.

First, as regards mitigating and managing debt and inflation

crises:

- Having a complete picture of government indebtedness is critical, for there is no meaningful *external* debt sustainability exercise that does not take into account the magnitude and features of outstanding *domestic* government debt, ideally including contingent liabilities.
- Debt sustainability exercises must be based on plausible scenarios for economic performance, because the evidence offers little support for the view that countries simply “grow out” of their debts. This observation may limit the options for governments that have inherited high levels of debt. Simply put, they must factor in the possibility of “sudden stops” in capital flows, for these are a recurrent phenomenon for all but the very largest economies in the world.
- The inflationary risks to monetary policy frameworks (whether the exchange rate is fixed or flexible) also seem to be linked in important ways to the levels of domestic debt. Many governments have succumbed to the temptation to inflate away domestic debt.

Second, policy makers must recognize that banking crises tend to be protracted affairs. Some crisis episodes (such as those of Japan in 1992 and Spain in 1977) were stretched out even longer by the authorities by a lengthy period of denial. Fiscal finances suffer mightily as government revenues shrink in the aftermath of crises, and bailout costs mount. Our extensive coverage of banking crises, however, says little about the much-debated issue of the efficacy of stimulus packages as a way of shortening the duration of the crisis and

cushioning the downside of the economy as a banking crisis unfolds. Pre-World War II banking crises were seldom met with countercyclical fiscal policies. The postwar period has witnessed only a handful of severe banking crises in advanced economies. Before 2007, explicit stimulus measures were a part of the policy response only in the Japanese crisis. In the numerous severe banking crises in emerging markets, fiscal stimulus packages were not an option, because governments were shut out of access to international capital markets. Increases in government spending in these episodes primarily reflected bailout outlays and markedly rising debt servicing costs. It is dangerous to draw conclusions about the effectiveness of fiscal stimulus packages from a single episode. However, the surge in government debt following a crisis is an important factor to weigh when considering how far governments should be willing to go to offset the adverse consequences of the crisis on economic activity. This message is particularly critical to countries with a history of debt intolerance, which may meet debt servicing difficulties even at relatively moderate levels of debt.

Third, on graduation, the greatest policy insight is that premature self-congratulations may lead to complacency and demotion to a lower grade. Several debt crises involving default or near-default occurred on the heels of countries' ratings upgrades, joining the OECD (e.g., Mexico, Korea, Turkey), and being generally portrayed as the poster children of the international community (e.g., Argentina in the late 1990s prior to its meltdown in late 2001).

The Latest Version of the This-Time-Is-Different Syndrome

Going into the recent financial crisis, there was a widespread view that debtors and creditors had learned from their mistakes and that financial crises were not going to return for a very long time, at least in emerging markets and developed economies. Thanks to better-informed macroeconomic policies and more discriminating lending

practices, it was argued, the world was not likely to see a major wave of defaults again. Indeed, in the run-up to the recent financial crisis, an oft-cited reason as to why "this time is different" for the emerging markets was that their governments were relying more on domestic debt financing.

But celebrations may be premature. They are certainly uninformed by the history of the emerging markets. Capital flow and default cycles have been around since at least 1800, if not before in other parts of the globe. Why they would end anytime soon is not obvious.

In the run-up to the recent crisis, in the case of rich countries one of the main this-time-is-different syndromes had to do with a belief in the invincibility of modern monetary institutions. Central banks became enamored with their own versions of "inflation targeting," believing that they had found a way both to keep inflation low and to optimally stabilize output. Though their successes were founded on some solid institutional progress, especially the independence of the central banks, those successes seem to have been oversold. Policies that appeared to work perfectly well during an all-encompassing boom suddenly did not seem at all robust in the event of a huge recession. Market investors, in turn, relied on the central banks to bail them out in the event of any trouble. The famous "Greenspan put" (named after Federal Reserve Chairman Alan Greenspan) was based on the (empirically well-founded) belief that the U.S. central bank would resist raising interest rates in response to a sharp upward spike in asset prices (and therefore not undo them) but would react vigorously to any sharp fall in asset prices by cutting interest rates to prop them up. Thus, markets believed, the Federal Reserve provided investors with a one-way bet. That the Federal Reserve would resort to extraordinary measures once a collapse started has now been proven to be a fact. In hindsight, it is now clear that a single-minded focus on inflation can be justified only in an environment in which other regulators are able to ensure that leverage (borrowing) does not become excessive.

The lesson of history, then, is that even as institutions and policy makers improve, there will always be a temptation to stretch

the limits. Just as an individual can go bankrupt no matter how rich she starts out, a financial system can collapse under the pressure of greed, politics, and profits no matter how well regulated it seems to be.

Technology has changed, the height of humans has changed, and fashions have changed. Yet the ability of governments and investors to delude themselves, giving rise to periodic bouts of euphoria that usually end in tears, seems to have remained a constant. No careful reader of Friedman and Schwartz will be surprised by this lesson about the ability of governments to mismanage financial markets, a key theme of their analysis.⁸ As for financial markets, Kindleberger wisely titled the first chapter of his classic book "Financial Crisis: A Hardy Perennial."⁹

We have come full circle to the concept of financial fragility in economies with massive indebtedness. All too often, periods of heavy borrowing can take place in a bubble and last for a surprisingly long time. But highly leveraged economies, particularly those in which continual rollover of short-term debt is sustained only by confidence in relatively illiquid underlying assets, seldom survive forever, particularly if leverage continues to grow unchecked. This time may seem different, but all too often a deeper look shows it is not. Encouragingly, history does point to warning signs that policy makers can look at to assess risk—if only they do not become too drunk with their credit bubble-fueled success and say, as their predecessors have for centuries, "This time is different."

DATA APPENDIXES