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Preface

This book provides a quantitative history of financial crises in their various guises. Our basic message is simple: We have been here before. No matter how different the latest financial frenzy or crisis always appears, there are usually remarkable similarities with past experience from other countries and from history. Recognizing these analogies and precedents is an essential step toward improving our global financial system, both to reduce the risk of future crisis and to better handle catastrophes when they happen.

If there is one common theme to the vast range of crises we consider in this book, it is that excessive debt accumulation, whether it be by the government, banks, corporations, or consumers, often poses greater systemic risks than it seems during a boom. Infusions of cash can make a government look like it is providing greater growth to its economy than it really is. Private sector borrowing binges can inflate housing and stock prices far beyond their long-run sustainable levels, and make banks seem more stable and profitable than they really are. Such large-scale debt buildups pose risks because they make an economy vulnerable to crises of confidence, particularly when debt is short term and needs to be constantly refinanced. Debt-fueled booms all too often provide false affirmation of a government's policies, a financial institution's ability to make outsized profits, or a country's standard of living. Most of these booms end badly. Of course, debt instruments are crucial to all economies, ancient and modern, but balancing the risk and opportunities of debt is always a challenge, a challenge policy makers, investors, and ordinary citizens must never forget.

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In this book we study a number of different types of financial crises. They include sovereign defaults, which occur when a government fails to meet payments on its external or domestic debt obligations or both. Then there are banking crises such as those the world has experienced in spades in the late 2000s. In a typical major banking crisis, a nation finds that a significant part of its banking sector has become insolvent after heavy investment losses, banking panics, or both. Another important class of crises consists of exchange rate crises such as those that plagued Asia, Europe, and Latin America in the 1990s. In the quintessential exchange rate crisis, the value of a country's currency falls precipitously, often despite a government "guarantee" that it will not allow this to happen under any circumstances. We also consider crises marked by bouts of very high inflation. Needless to say, unexpected increases in inflation are the de facto equivalent of outright default, for inflation allows all debtors (including the government) to repay their debts in currency that has much less purchasing power than it did when the loans were made. In much of the book we will explore these crises separately. But crises often occur in clusters. In the penultimate text chapter of the book we will look at situations—such as the Great Depression of the 1930s and the latest worldwide financial crisis—in which crises occur in bunches and on a global scale.

Of course, financial crises are nothing new. They have been around since the development of money and financial markets. Many of the earliest crises were driven by currency debasements that occurred when the monarch of a country reduced the gold or silver content of the coin of the realm to finance budget shortfalls often prompted by wars. Technological advances have long since eliminated a government's need to clip coins to fill a budget deficit. But financial crises have continued to thrive through the ages, and they plague countries to this day.

Most of our focus in this book is on two particular forms of crises that are particularly relevant today: sovereign debt crises and banking crises. Both have histories that span centuries and cut across regions. Sovereign debt crises were once commonplace among the now advanced economies that appear to have "graduated" from periodic

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bouts of government insolvency. In emerging markets, however, recurring (or serial) default remains a chronic and serious disease. Banking crises, in contrast, remain a recurring problem everywhere. They are an equal-opportunity menace, affecting rich and poor countries alike. Our banking crisis investigation takes us on a tour from bank runs and bank failures in Europe during the Napoleonic Wars to the recent global financial crises that began with the U.S. subprime crisis of 2007.

Our aim here is to be expansive, systematic, and quantitative: our empirical analysis covers sixty-six countries over nearly eight centuries. Many important books have been written about the history of international financial crises,[1] perhaps the most famous of which is Kindleberger's 1989 book *Manias, Panics and Crashes*.[2] By and large, however, these earlier works take an essentially narrative approach, fortified by relatively sparse data.

Here, by contrast, we build our analysis around data culled from a massive database that encompasses the entire world and goes back as far as twelfth-century China and medieval Europe. The core "life" of this book is contained in the (largely) simple tables and figures in which these data are presented rather than in narratives of personalities, politics, and negotiations. We trust that our visual quantitative history of financial crises is no less compelling than the earlier narrative approach, and we hope that it may open new vistas for policy analysis and research.

Above all, our emphasis is on looking at long spans of history to catch sight of "rare" events that are all too often forgotten, although they turn out to be far more common and similar than people seem to think. Indeed, analysts, policy makers, and even academic economists have an unfortunate tendency to view recent experience through the narrow window opened by standard data sets, typically based on a narrow range of experience in terms of countries and time periods. A large fraction of the academic and policy literature on debt and default draws conclusions based on data collected since 1980, in no small part because such data are the most readily accessible. This approach would be fine except for the fact that financial crises have much longer cycles, and a data set that covers twenty-five years simply cannot give

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one an adequate perspective on the risks of alternative policies and investments. An event that was rare in that twenty-five-year span may not be all that rare when placed in a longer historical context. After all, a researcher stands only a one-in-four chance of observing a "hundred-year flood" in twenty-five years' worth of data. To even begin to think about such events, one needs to compile data for several centuries. Of course, that is precisely our aim here.

In addition, standard data sets are greatly limited in several other important respects, especially in regard to their coverage of the types of government debt. In fact, as we shall see, historical data on domestically issued government debt is remarkably difficult to obtain for most countries, which have often been little more transparent than modern-day banks with their off–balance sheet transactions and other accounting shenanigans.

The foundations of our analysis are built on a comprehensive new database for studying international debt and banking crises, inflation, and currency crashes and debasements. The data come from Africa, Asia, Europe, Latin America, North America, and Oceania (data from sixty-six countries in all, as previously noted, plus selected data for a number of other countries). The range of variables encompasses, among many other dimensions, external and domestic debt, trade, national income, inflation, exchange rates, interest rates, and commodity prices. The data coverage goes back more than eight hundred years, to the date of independence for most countries and well into the colonial period for several. Of course, we recognize that the exercises and illustrations that we provide here can only scratch the surface of what a data set of this scope and scale can potentially unveil.

Fortunately, conveying the details of the data is not essential to understanding the main message of this book: we have been here before. The instruments of financial gain and loss have varied over the ages, as have the types of institutions that have expanded mightily only to fail massively. But financial crises follow a rhythm of boom and bust through the ages. Countries, institutions, and financial instruments may change across time, but human nature does not. As we will discuss in the final chapters of this book, the financial crisis of

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the late 2000s that originated in the United States and spread across the globe—which we refer to as the Second Great Contraction—is only the latest manifestation of this pattern.

We take up the latest crisis in the final four chapters before the conclusion, in which we review what we have learned; the reader should find the material in chapters 13–16 relatively straightforward and self-contained. (Indeed, readers interested mainly in lessons of history for the latest crisis are encouraged to jump directly to this material in a first reading.) We show that in the run-up to the subprime crisis, standard indicators for the United States, such as asset price inflation, rising leverage, large sustained current account deficits, and a slowing trajectory of economic growth, exhibited virtually all the signs of a country on the verge of a financial crisis—indeed, a severe one. This view of the way into a crisis is sobering; we show that the way out can be quite perilous as well. The aftermath of systemic banking crises involves a protracted and pronounced contraction in economic activity and puts significant strains on government resources.

The first part of the book gives precise definitions of concepts describing crises and discusses the data underlying the book. In the construction of our data set we have built heavily on the work of earlier scholars. However, our data set also includes a considerable amount of new material from diverse primary and secondary sources. In addition to providing a systematic dating of external debt and exchange rate crises, the appendixes to this book catalog dates for domestic inflation and banking crises. The dating of sovereign defaults on domestic (mostly local-currency) debt is one of the more novel features that rounds out our study of financial crises.

The payoff to this scrutiny comes in the remaining parts of the book, which apply these concepts to our expanded global data set. Part II turns our attention to government debt, chronicling hundreds of episodes of default by sovereign nations on their debt to external creditors. These "debt crises" have ranged from those related to mid-fourteenth-century loans by Florentine financiers to England's Edward III to German merchant bankers' loans to Spain's Hapsburg Monarchy to massive loans made by (mostly) New York bankers to

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Latin America during the 1970s. Although we find that during the modern era sovereign external default crises have been far more concentrated in emerging markets than banking crises have been, we nevertheless emphasize that even sovereign defaults on external debt have been an almost universal rite of passage for every country as it has matured from an emerging market economy to an advanced developed economy. This process of economic, financial, social, and political development can take centuries.

Indeed, in its early years as a nation-state, France defaulted on its external debt no fewer than eight times (as we show in chapter 6)! Spain defaulted a mere six times prior to 1800, but, with seven defaults in the nineteenth century, surpassed France for a total of thirteen episodes. Thus, when today's European powers were going through the emerging market phase of development, they experienced recurrent problems with external debt default, just as many emerging markets do today.

From 1800 until well after World War II, Greece found itself virtually in continual default, and Austria's record is in some ways even more stunning. Although the development of international capital markets was quite limited prior to 1800, we nevertheless catalog the numerous defaults of France, Portugal, Prussia, Spain, and the early Italian city-states. At the edge of Europe, Egypt, Russia, and Turkey have histories of chronic default as well.

One of the fascinating questions raised in our book is why a relatively small number of countries, such as Australia and New Zealand, Canada, Denmark, Thailand, and the United States, have managed to avoid defaults on central government debt to foreign creditors, whereas far more countries have been characterized by serial default on their external debts.

Asian and African financial crises are far less researched than those of Europe and Latin America. Indeed, the widespread belief that modern sovereign default is a phenomenon confined to Latin America and a few poorer European countries is heavily colored by the paucity of research on other regions. As we shall see, precommunist China repeatedly defaulted on international debts, and modern-day India and Indonesia both defaulted in the 1960s, long

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before the first postwar round of Latin defaults. Postcolonial Africa has a default record that looks as if it is set to outstrip that of any previously emerging market region. Overall, we find that a systematic quantitative examination of the postcolonial default records of Asia and Africa debunks the notion that most countries have avoided the perils of sovereign default.

The near universality of default becomes abundantly clear in part II, where we begin to use the data set to paint the history of default and financial crises in broad strokes using tables and figures. One point that certainly jumps out from the analysis is that the fairly recent (2003–2008) quiet spell in which governments have generally honored their debt obligations is far from the norm.

The history of domestic public debt (i.e., internally issued government debt) in emerging markets, in particular, has largely been ignored by contemporary scholars and policy makers (even by official data providers such as the International Monetary Fund), who seemed to view its emergence at the beginning of the twenty-first century as a stunning new phenomenon. Yet, as we will show in part III, domestic public debt in emerging markets has been extremely significant during many periods and in fact potentially helps resolve a host of puzzles pertaining to episodes of high inflation and default. We view the difficulties one experiences in finding data on government debt as just one facet of the general low level of transparency with which most governments maintain their books. Think of the implicit guarantees given to the massive mortgage lenders that ultimately added trillions to the effective size of the U.S. national debt in 2008, the trillions of dollars in off–balance sheet transactions engaged in by the Federal Reserve, and the implicit guarantees involved in taking bad assets off bank balance sheets, not to mention unfunded pension and medical liabilities. Lack of transparency is endemic in government debt, but the difficulty of finding basic historical data on central government debt is almost comical.

Part III also offers a first attempt to catalog episodes of overt default on and rescheduling of domestic public debt across more than a century. (Because so much of the history of domestic debt has largely been forgotten by scholars, not surprisingly, so too has its his-

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tory of default.) This phenomenon appears to be somewhat rarer than external default but is far too common to justify the extreme assumption that governments always honor the nominal face value of domestic debt, an assumption that dominates the economics literature. When overt default on domestic debt does occur, it appears to occur in situations of greater duress than those that lead to pure external default—in terms of both an implosion of output and a marked escalation of inflation.

Part IV broadens our discussion to include crises related to banking, currency, and inflation. Until very recently, the study of banking crises has typically focused either on earlier historical experiences in advanced countries, mainly the banking panics before World War II, or on modern-day experiences in emerging markets. This dichotomy has perhaps been shaped by the belief that for advanced economies, destabilizing, systemic, multicountry financial crises are a relic of the past. Of course, the recent global financial crisis emanating out of the United States and Europe has dashed this misconception, albeit at great social cost.

The fact is that banking crises have long plagued rich and poor countries alike. We reach this conclusion after examining banking crises ranging from Denmark's financial panic during the Napoleonic Wars to the recent first global financial crisis of the twenty-first century. The incidence of banking crises proves to be remarkably similar in the high- and the middle- to low-income countries. Banking crises almost invariably lead to sharp declines in tax revenues as well as significant increases in government spending (a share of which is presumably dissipative). On average, government debt rises by 86 percent during the three years following a banking crisis. These indirect fiscal consequences are thus an order of magnitude larger than the usual costs of bank bailouts.

Episodes of treacherously high inflation are another recurrent theme. No emerging market country in history has managed to escape bouts of high inflation. Indeed, there is a very strong parallel between our proposition that few countries have avoided serial default on external debt and the proposition that few countries have avoided serial bouts of high inflation. Even the United States has had

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a checkered history, including in 1779, when the inflation rate approached 200 percent. Early on across the world, as already noted, the main device for defaulting on government obligations was that of debasing the content of the coinage. Modern currency presses are just a technologically advanced and more efficient approach to achieving the same end. As a consequence, a clear inflationary bias throughout history emerges. Starting in the twentieth century, inflation spiked radically higher. Since then, inflation crises have stepped up to a higher plateau. Unsurprisingly, then, the more modern period also has seen a higher incidence of exchange rate crashes and larger median changes in currency values. Perhaps more surprising, and made visible only by a broader historical context, are the early episodes of pronounced exchange rate instability, notably during the Napoleonic Wars.

Just as financial crises have common macroeconomic antecedents in asset prices, economic activity, external indicators, and so on, so do common patterns appear in the sequencing (temporal order) in which crises unfold, the final subject of part IV.

The concluding chapter offers some reflections on crises, policy, and pathways for academic study. What is certainly clear is that again and again, countries, banks, individuals, and firms take on excessive debt in good times without enough awareness of the risks that will follow when the inevitable recession hits. Many players in the global financial system often dig a debt hole far larger than they can reasonably expect to escape from, most famously the United States and its financial system in the late 2000s. Government and government-guaranteed debt (which, due to deposit insurance, often implicitly includes bank debt) is certainly the most problematic, for it can accumulate massively and for long periods without being put in check by markets, especially where regulation prevents them from effectively doing so. Although private debt certainly plays a key role in many crises, government debt is far more often the unifying problem across the wide range of financial crises we examine. As we stated earlier, the fact that basic data on domestic debt are so opaque and difficult to obtain is proof that governments will go to great lengths to hide their books when things are going wrong, just as financial insti-

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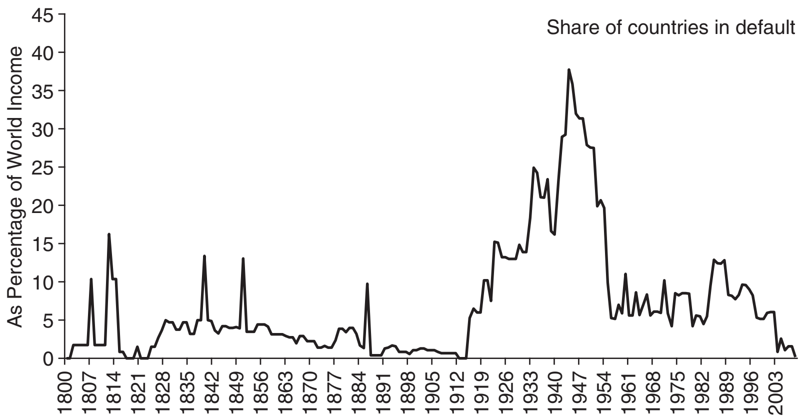

Figure P.1. Sovereign external debt, 1800–2008: Percentage of countries in external default or restructuring weighted by their share of world income.

tutions have done in the contemporary financial crisis. We see a major role for international policy-making organizations, such as the International Monetary Fund, in providing government debt accounts that are more transparent than those available today.

Our immersion in the details of crises that have arisen over the past eight centuries and in data on them has led us to conclude that the most commonly repeated and most expensive investment advice ever given in the boom just before a financial crisis stems from the perception that "this time is different." That advice, that the old rules of valuation no longer apply, is usually followed up with vigor. Financial professionals and, all too often, government leaders explain that we are doing things better than before, we are smarter, and we have learned from past mistakes. Each time, society convinces itself that the current boom, unlike the many booms that preceded catastrophic collapses in the past, is built on sound fundamentals, structural reforms, technological innovation, and good policy.

Given the sweeping data on which this book has been built, it is simply not possible to provide textural context to all the hundreds of episodes the data encompass. Nevertheless, the tables and figures speak very powerfully for themselves of the phenomenal recurrent nature of the problem. Take figure P.1, which shows the per-

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centage of countries worldwide, weighted by GDP, that have been in a state of default on their external debt at any time.

The short period of the 2000s, represented by the right-hand tail of the chart, looks sufficiently benign. But was it right for so many policy makers to declare by 2005 that the problem of sovereign default on external debt had gone into deep remission? Unfortunately, even before the ink is dry on this book, the answer will be clear enough. We hope that the weight of evidence in this book will give future policy makers and investors a bit more pause before next they declare, "This time is different." It almost never is.