Do countries "graduate" from crises? Some historical perspective

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The widespread banking crises since 2007 among advanced economies and the "near" default of Greece in 2010 dashed the popular notion that rich countries have outgrown severe financial crises. Record or near-record declines in output accompanying these events signaled the end of the short-lived "great moderation era."[2] In fact, graduation from recurring sovereign external debt crises is a very tortuous process that sometimes takes a century or more. For banking crises, we simply do not know what it takes to graduate; it is unclear whether any country has managed it.

In our recent paper Qian, Reinhart and Rogoff (2010), we address the elusive concept of "graduation" from external default, banking and inflation crises. Employing a data set cataloging more than two centuries of financial crises for over sixty countries (developed in Reinhart and Rogoff, 2009), we explore the risk of crisis reversals across advanced economies and middle- and low-income countries. We show that ***two decades*** without a relapse is an important marker albeit far from a guarantee against recidivism. Post 1800, roughly two thirds of recurrences of external default, and three quarters of recurrence of inflation crisis, have occurred within a twenty-year window. However, crisis recidivism

[1] Qian and Reinhart are at the University of Maryland and Rogoff is at Harvard University.

[2] The great moderation begins in the mid-1980s, and 20 years is but a modest time frame for the issues we discuss here.

distributions have very **fat tails**, so that it takes at least fifty and perhaps longer to meaningfully speak of "graduation". [3]

The main findings of our study can be summarized as follows:

- The process of "graduation," defined as the emergence from recurrent crisis bouts, is a long drawn-out process. False starts are common and recurrent. These false starts are routinely (mis)interpreted by financial markets and policy makers as evidence the countries have really turned the corner **quickly** because *this time is different*. False starts are more the norm than the exception in the case of banking crises, for both high and middle-low income countries.

- The vulnerability to crisis in high-income countries versus middle-low income countries differs most in external default crises, somewhat less for inflation crises, and is surprisingly similar for banking crises. Currency crashes are also a recurring phenomenon in advanced and emerging economies alike.

- The sequence for most of countries is first to graduate from external default crises, then from inflation crises.

Varieties of financial crises across the ages

In Table 1, we present a timeline of financial crises that underscores how the incidence of a particular strand of crisis (default, inflation and banking) rises and declines across the centuries.

[3] As in RR (2009), inflation crises are defined as years where the annual inflation rate exceeds 20 percent.

As the table indicates, between 1550 and 1800, sovereign defaults on external debt were relatively common in Europe. Defaults, however, were relatively rare elsewhere if only because (a) there were relatively few independent nations outside Europe (not possible to have a sovereign default with out being sovereign) and (b) the crude state of global capital markets meant that relatively few countries were wealthy enough to attract significant international capital flows and have the "luxury" of external debts. Before 1800, systemic banking and inflation crises were relatively rare everywhere because, in the case of the former, the legal and technological underpinnings of modern private banking had not reached a stage of maturity and, as to the latter, the printing press was not yet in wide use. Debasing coinage required more effort.

The end of Napoleonic War in the early 1800s marks a significant transition. The largest advanced countries were increasingly able to avoid external default partly by their ability to issue an increasing share of their debt domestically. Default, however, became common in "peripheral" or newly-independent countries. Over the same period, advanced economies developed more sophisticated banking systems. As the number of banks grew, so did the incidence of banking crises. The "typical" emerging market did not have a well developed domestic financial and relied on external bank and bankers; the co-existence during this period of a low incidence of domestic banking crises and a high incidence of default on external debts should not be surprising.

By the turn of the twentieth century, emerging market financial institutions had developed to the point where domestic banking crises became more common. Due to the financial repression that followed the Great Depression, banking crises were relatively rare. As financial repression thawed into the early 1970s, banking crises became more frequent in the advanced economies and serial in many emerging markets, bringing us to the recent financial crisis episode.

Table 1- Varieties of financial crises across the ages, 1550-2010

	External debt crises	Banking crises	Inflation crises
1550	frequent in advanced economies (including the "world powers" of the time) Serial in some cases	rare	rare
Napoleonic wars end 1815			
1826	frequent in "peripheral' advanced economies and most emerging markets	serial in advanced/ rare in emerging	
1850			
1900		serial in advanced/ more frequent in emerging	
WWI begins 1913			frequent in advanced and emerging
WWII ends 1945		rare in advanced **and** emerging	
post-1945			
1964			rare
1973			frequent in advanced and emerging
early 1980s		more frequent in advanced/serial in emerging	
early 1990s			frequent in emerging
2000	Serial in some emerging markets		
2009			rare
2010	??		

Source: Qian, Reinhart and Rogoff (2010)

Crisis probabilities: advanced versus emerging middle- and low-income countries

Table 2 documents the difference between the (advanced) high income countries and the emerging economies for the three types of crises. The largest gap between the two country groups is the likelihood of external default. The average external default crisis probability of high-income group is less than half that of middle and low income countries and almost one fifth that of Latin America. The difference across groups in the incidence of high inflation shows a similar pattern. The average probability of banking crises in the advanced and emerging countries, by contrast, are extremely similar.

Table 2- Summary statistics of crisis probabilities

	External Default		Inflation		Banking	
	Average	Std Dev	Average	Std Dev	Average	Std Dev
World	0.19	0.18	0.12	0.12	0.08	0.07
High-income	0.07	0.13	0.06	0.05	0.07	0.04
Middle and low	0.19	0.17	0.17	0.17	0.11	0.09
Difference (middle less high)	0.12		0.11		0.04	
Memorandum item:						
Of which Latin America	0.34	0.13	0.12	0.07	0.04	0.03

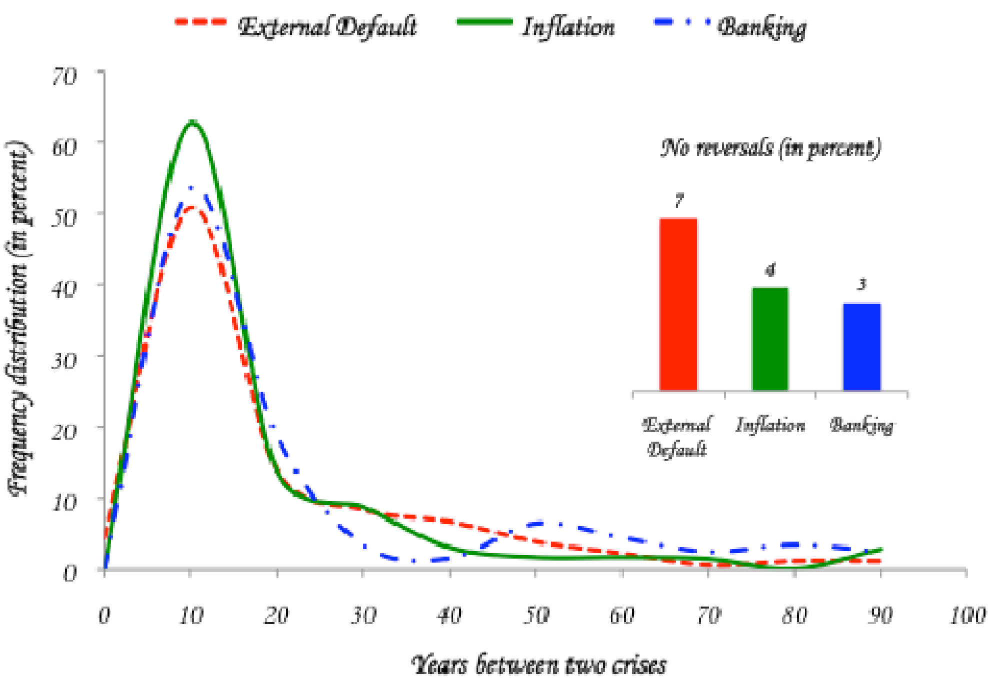
Source: Qian, Reinhart and Rogoff (2010)

Banking crises are "an equal opportunity menace" (Reinhart and Rogoff, 2009, chapter 10). Banking crises picked up dramatically in emerging markets since 1980, and as is well-known these have flourished in rich countries since 2007 as well. At present, neither high nor middle-low income countries have imminent prospects of meeting the criteria for "graduation" from banking crises.

The risk of a reversal: Tranquil periods between crises

We next examine the frequency distribution of "tranquil" periods. How long, on average, is it before one crisis episode ends and the next crisis begins? Figure 1 gives the statistics separately for external default, inflation and banking crises. The frequencies are broadly similar across different types of crises, with a significant share of distribution falling between ten and twenty years. However, the fat tails of the distributions highlight that twenty years without a default, banking or inflation crisis is hardly decisive evidence of "graduation".

Figure 1- Duration of "tranquil time"



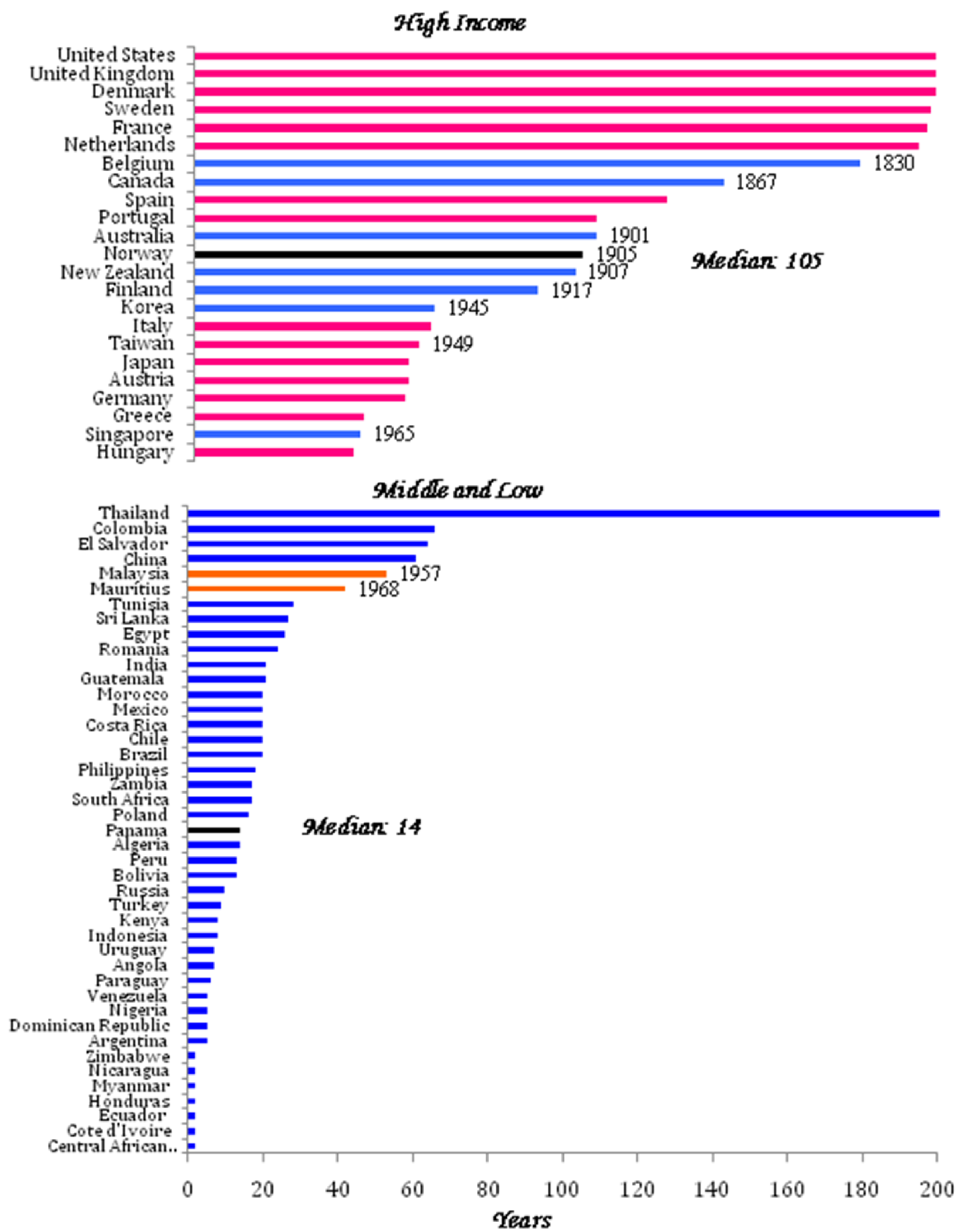
Source: Qian, Reinhart and Rogoff (2010)

For external defaults, most emerging market recurrences happen within twenty years, only a few countries that have once defaulted have avoided any further defaults, at least not long enough to pass the 50-year filter we use. For inflation and banking crises, the twenty year mark contains an even larger percentage of reversals and, at the same time, the cases where there are of no reversal (or recurrence) are scarce.

To gain a deeper insight into recidivism – or its complement, graduation -- we look at measures of distance since the last crisis. As shown in Figure 2, the median tranquil period for default is just over a century for the advance countries (105 years) versus only 14 years for the developing countries.[4] The world median is 23 years. For banking crises, the median for the advanced countries is 9 versus 12 years for the developing countries.

[4] The 105-year tranquil spell for advanced economies is calculated including 211-year entries (1800-2010) for countries which never defaulted or had an inflation crisis during this sample.

Figure 2 – Years since last external default through 2010, (or since 1800 or year of independence if there are no defaults)



Source: Qian, Reinhart and Rogoff (2010)

Reflections

Because financial crises tend to occur only at very long periodicities, it is easy to forget that they happen at all. Across a large data set, we find that two decades without a crisis is an important market to signal the "first step" toward graduation but that there are still relatively high odds of relapsing into crisis, even after several decades of tranquility. ***Premature declarations of victory are all too common.*** Argentina's poster child status among the international as late as 1998-1999 (on the eve of disaster) is an illustration of this tendency. Rich countries do seem significantly less likely to default on external debt, though of course part of their :graduation" is a by-product of being able to fund themselves internally in domestically issued debt, or, in the case of Greece recently, in being a part of a wealthy club that can help support a bail out. When it comes to banking crises we state the obvious; the post-2007 resurgence of these makes plain that, to date, it is not possible to meaningfully speak of "graduation". Indeed, the post-World War II-2006 period was the ***exception*** rather than the rule in our 211-year sample for the relative absence among advanced economies of banking crises.

References

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