

From Health Crisis to Financial Distress

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WORLD BANK GROUP

Development Economics Vice Presidency

Office of the Chief Economist

April 2021

Abstract

I discuss the multifaceted economic and financial vulnerabilities that have been created or exacerbated by the COVID-19 pandemic on a foundation of already weak economic fundamentals in many countries. Crises often do not travel alone. Banking, sovereign debt, exchange rate crashes, sudden stops, and inflation often intersect to become severe conglomerate crises. Historically, whether of

the *individual* or *conglomerate* variety, crises influence the shape and speed of economic recovery. As the health crisis morphs into a financial or debt crisis in some countries, I discuss what may lie ahead in terms of the stages in crisis resolution and a brief reflection on how the resolution process can be expedited.

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From Health Crisis to Financial Distress*

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The World Bank

JEL: F3, F4, G01, N1, N2

*These remarks were prepared for the Mundell-Fleming Lecture at the International Monetary Fund's 21st Jaques Polak Annual Research Conference *Living in the Extreme: Economics of Pandemics, Climate Change and Tail Risk*, November 5-6, 2020. I would like to thank Clemens Graf Von Luckner and Vincent Reinhart for useful discussions and comments.

It is a real honor to deliver the Mundell-Fleming lecture. Robert Mundell was my thesis advisor, and I have many fond memories of our long discussions during that process. Bob has not only shaped our profession's thinking of open-economy macroeconomics directly but also through his students. Almost 20 years ago, when I was at the IMF Research Department, the second Mundell-Fleming lecture was delivered by Ken Rogoff to honor Rudi Dornbusch, his mentor, who was, in turn, Bob Mundell's student. Rudi was someone who many of us respected and loved; we wish he could be here to share his wisdom at a moment like the one we're going through.

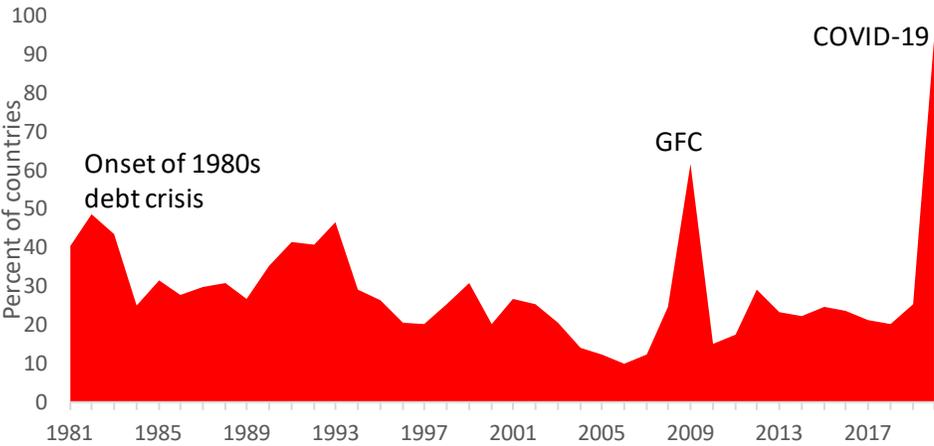
My written remarks proceed as follows. The first section discusses the multifaceted economic and financial vulnerabilities that have been created or exacerbated by the COVID-19 pandemic on a foundation of already weak economic fundamentals in many countries. In the second section, I provide a brief catalog of crises (banking, sovereign debt, inflation, sudden stops, etc.) with an emphasis on the fact that, historically, some of these crises often intersect in severe *conglomerate* crises. Section III is focused on how crises influenced the shape and speed of economic recovery. I speculate how they may again do so. As the health crisis morphs into a financial or debt crisis in some countries, I discuss what may lie ahead in terms of the *stages* in crisis resolution in Section IV.

I. The Setting: Mounting Risks

Pandemics do occur, although severe ones are rare. Still, I am not aware of a historical episode that can provide any insight as to the likely economic consequences of the global coronavirus crisis. This time truly *is* different. A feature of this episode that makes it unique is the policy response. Governments around the world have given priority to measures that limit the spread of disease and save lives through extensive lockdowns, strict international travel bans, and the prohibition of all manner of public events.

These measures could not be further from the policy response to the deadliest viral outbreak of modern times, the 1918-1920 Spanish influenza.¹ That pandemic, which claimed at least 50 million worldwide, occurred against the backdrop of World War I. This fact alone precludes drawing meaningful comparisons regarding the effects of the COVID-19 pandemic *per se* on the global economy. In fact, in 1918, the year in which influenza deaths peaked in the United States, real GDP (driven by wartime activity) rose 9 percent. By contrast, as shown in Figure 1, the October 2020 *World Economic Report* (WEO) shows that 183 countries of 197 covered (95 percent) and including the United States are estimated to have had a contraction in real per capita GDP in 2020. In many cases, these were record-shattering declines.

Figure 1. Share of countries posting a decline in real per capita GDP: 1981-2020 (annual, in percent)



Sources: International Monetary Fund, World Economic Outlook, October 2020, and author’s calculations.

This synchronicity is uncommon. True, financial and sovereign debt crises engulfed the developing world in the early 1980s, while the global economy suffered a deep recession. By 1983, however, the United States and other advanced economies were enjoying a robust recovery coupled with lower inflation rates even as many emerging markets and developing economies

¹ See Barry (2009) for an excellent account of this episode and the government response.

(EMDEs) were entering their own “lost decade.” By contrast, the “Global” Financial Crisis (GFC) of 2007-2009 primarily affected the advanced economies. As the United States and Europe slipped into recession, China grew vigorously and lifted global commodity prices, boosting growth in EMDEs. China’s surging overseas lending to many EMDEs further supported economic activity and facilitated V-shaped economic recoveries following the global turbulence of late 2008-early 2009.² To find peacetime parallels to the cross-country synchronicity and global economic effects of COVID-19, one has to extend the search back to the 1930s.

While the coronavirus crisis did not start as a financial crisis, it may well be morphing into one. The headlines of the year have been dominated by news of the pandemic’s spread, output collapses, and surges in poverty and the newly unemployed.³ Behind these disturbing trends, a quieter financial balance sheet crisis is gathering momentum across a broad swath of countries. The financial fallout from the pandemic, in principle, does not respect differences by region or income status, but middle-to-low-income countries are proving especially vulnerable. Scores of financial institutions worldwide are facing and will continue to face for some time a rise in nonperforming loans (NPLs).

Historically, banking crises emerge after a lengthy expansion in economic activity. Growth is often fueled by a credit surge and rising leverage. Under the motto of *this time is different*, asset price bubbles emerge during the boom (whether in real estate, commodities, equity, or bonds varies by episode). As the economic expansion slows and turns into recession, the loans made during prosperous circumstances are looked upon with regret. Sometimes the balance sheet problems undermine confidence and runs on banks and financial institutions turn the crisis into a full-fledged panic.⁴

² Horn, Reinhart, and Trebesch (2019) document the surge in China’s lending to EMDEs during this period. They also draw parallels to the boom in lending by US commercial banks in the late 1970s that ushered in the debt crises of the 1980s.

³ World Bank (2020a) documents the rise in global poverty rates during the pandemic; it is the first increase in this measure of poverty since the late 1990s.

⁴ Cross-country studies that discuss or examine the antecedents of financial crises include Conant (1919), Kindelberger (1978), Bernanke and James (1991), Eichengreen (1992), Caprio and Klingbiel (1996), Kaminsky and

The run-up to COVID-19 does not fit the historical boom-bust pattern, as it is not predicated on mistakes made in a prior economic expansion or an asset price bubble. The common thread is that the historic magnitudes and likely persistence of the downturn in economic activity may expose evolving balance sheet frailties. It is a regressive crisis, within and across countries. Job losses disproportionately hit low-income households and smaller firms that have fewer assets to avert insolvency. EMDEs do not have the fiscal and monetary capacity to respond as vigorously as their wealthier counterparts to counteract the damage that the pandemic and lockdowns are inflicting on their economies. While there are major cross-country differences within this group, EMDEs' recovery is poised to be more protracted, feeding into the balance sheet frailties.

High leverage on the eve of the pandemic will act to amplify the balance sheet problems of the financial sector in many countries. The IMF has repeatedly flagged concerns about the pre-COVID-19 rise in corporate leverage in many emerging markets, where much of the debt is denominated in US dollars. The two largest economies, the United States and China, have highly leveraged corporate sectors. Australia, Canada, and Thailand, among others, have high or record levels of household debt. In Africa, where the NPL ratio was estimated at around 11 percent in 2019, microfinance financial institution portfolios will come under stress as much of their lending is to households with volatile income and no assets.

Since the onset of the pandemic, a broad range of policies have been introduced by governments across the globe to provide liquidity to the many businesses that have been shuttered during the lockdowns and to support households hit by a sudden loss of income and employment.⁵ Grace periods in the repayment of existing loans have been granted. Re-contracting of loans in favor of longer maturities or lower interest rates has also been common. The hope is that because the health crisis is temporary, so too will be the financial distress of firms and households. However,

Reinhart (1999), Bordo, Eichengreen, Kliengbiel, and Martinez-Peria (2001), Reinhart and Rogoff (2008, 2009), Schularick and Taylor (2012), Laeven and Valencia (2013), Bordo and Meissner (2016).

⁵ See World Bank (2020b) for a cross-country database on these policies.

even with a prompt resolution of the pandemic in the form of a globally available vaccine so that we acquire effective herd immunity, significant damage has been inflicted on the global economy and the balance sheets of financial institutions. Given the emergency, these policies have provided a valuable stimulus tool beyond the conventional scope of fiscal and monetary policy. But as grace periods come to an end, more will be revealed on whether the problem facing countless firms and households is insolvency rather than illiquidity.

The challenge for many EMDEs extends beyond household and corporate balance sheets and encompasses the sovereign. Today, more than half of the low-income countries eligible for relief under the Debt Service Suspension Initiative (DSSI) are in debt distress or at high risk.⁶ Several emerging markets have recently restructured (Argentina and Ecuador) or remain in default (Lebanon, Suriname, and Venezuela). The recent evolution of sovereign credit ratings is informative: while 15 percent of the advanced economies have had their rating cut since the start of 2020, the comparable share of downgrades for EMDEs that are rated is almost 40 percent.⁷

The US Federal Reserve's dramatic interest rate cut and other liquidity-enhancing measures in response to the pandemic have significantly eased global financial conditions for EMDEs and kept the incidence of new sovereign defaults from spiking.⁸ This stands in stark contrast to the historic interest rate hikes that ushered in the developing-country debt crisis of the 1980s. Nonetheless, many EMDEs have recorded significant capital outflows and markedly weakening currencies (in some cases, outright currency crashes) during 2020. Furthermore, even before COVID-19, some large emerging markets (Argentina, Nigeria, and Turkey) as well as several of the low-income countries in debt distress have found it difficult to contain inflation to single digits.

The preceding narrative about current global fragilities places in context the topic I wish to address: Economic and financial crises in their various "guises or varieties." Historically,

⁶ World Bank (2020c). The country risk ratings and other details are available at <https://www.worldbank.org/en/topic/debt/brief/covid-19-debt-service-suspension-initiative>.

⁷ Based on Fitch, Moody's, and Standard and Poor's sovereign ratings.

⁸ See Farah-Yacoub et al. (2021, forthcoming) for an encompassing database on sovereign defaults over 1800-2020.

different types of crises (banking, sovereign external debt, currency, etc.) have often traveled together. These “*conglomerate crises*” reinforce fault lines and dig the economy into a deeper hole, often complicating and delaying recovery.⁹

Charles Kindleberger observed in his classic book that “*financial crises are hardy perennials.*” While crises are not exactly seasonal, their recurrence may be compared to the Loch Ness Monster, which has presumably been around for several centuries. Just when the public forgets about Nessie, someone claims they just saw it raise its head. After a little more than a decade since the last bout of crises, concerns about evolving or impending crises are once again on the rise.

II. Conglomerate Crises and Other Concepts

This section opens by providing a sketch of individual crisis “types” (banking, sovereign external debt, currency crash, etc.). Related concepts, such as differences between “default spells” and debt restructuring deals are discussed next. Lastly, I highlight the intersection of multifaceted problems, the *conglomerate* crisis, and its historical prevalence and connection to economic performance.

The definitions, concepts, and measurement used to date crises and related commentary and references are presented in Table 1. As the table highlights, the dating of crises involves both an “event” approach, which relies on chronologies, announcements, and news, and a “quantitative” methodology, which focuses on the performance of one or more economic and financial indicators relative to some threshold. The references provided in the table only scratch the surface of the voluminous existing literature. At any rate, the evidence linking the crises listed in Table 1 and economic performance (discussed in Section IV) suggests that the speed and shape of the post-COVID-19 recovery will depend importantly on how successful countries are in avoiding any or all of these kinds of crises.

⁹ See Kaminsky and Reinhart (1999) on banking and currency crises, Reinhart and Rogoff (2011) on banking and external sovereign debt crises, and Reinhart (2018) on the “conglomerate” crisis.

Table 1. Defining and dating crises varieties

Crisis type	Threshold or criteria to “date” the crisis	Selected studies
Systemic banking crisis	Event: The beginning of a banking crisis is marked by one of two types of events: (1) bank runs that lead to the closure, merging, or takeover by the public sector of one or more financial institutions; and (2) if there are no runs, the closure, merging, take-over, or large-scale government assistance of an important financial institution (or group of institutions), that marks the start of a string of similar outcomes for other financial institutions.	Conant (1919), Bernanke and James (1991), Eichengreen (1992), Caprio and Klingbiel (1996), Kaminsky and Reinhart (1999), Bordo, et.al.(2001), Reinhart and Rogoff (2008), and Laeven and Valencia (2013) and (2020).
Borderline/financial distress	Event: Same as above but problems could be idiosyncratic affecting a single large institution, or a limited number of smaller institutions. In either case, it does not involve a “too big to fail situation.” In the 19 th century local/regional banking problems were not uncommon.	A subset of the above studies, including the early one by Conant (1919) also include borderline/distress cases.
Currency crises and crashes	Quantitative: Indices to define currency crises range from the univariate, relying entirely on changes in the exchange rate (depreciations versus the relevant anchor currency greater than some threshold); bivariate to include foreign exchange reserves losses; tri-variate, adding a short-term policy rate to also capture an interest rate defense.	Univariate studies: Frankel and Rose (1996); Reinhart and Rogoff (2009). Bivariate: Kaminsky and Reinhart (1999); tri-variate Eichengreen, Rose and Wyplosz (1996)
Inflation crises	Quantitative: An annual (or 12-month) inflation rate above a particular threshold. Because of its multi-century, pre-fiat money coverage Reinhart and Rogoff (2009) use 20 percent per annum. The remaining studies referenced, which focus on the modern era, use a 40 percent annual threshold.	Bruno and Easterly (1998) Reinhart and Rogoff (2003) and (2009), Ilzetzki, Reinhart, and Rogoff (2019).
Hyperinflation	Quantitative: Inflation \geq 50 percent a month Annual increases in the price level exceeding 500 percent.	Cagan (1956) is associated with the monthly definition while Reinhart and Rogoff (2009) adopt the annual threshold.
External sovereign debt crisis: Private creditors	Credit event: A sovereign default is defined as the failure to meet principal or interest payment on the due date (or within the specified grace period). The episodes also include instances where rescheduled debt is ultimately extinguished in terms less favorable to the creditors than the original contract. Quantitative: External arrears to the private sector (banks, bondholders, and others)	The major credit rating agencies define credit events in the same manner. Beers, Jones, Walsh (2020) defines defaults by arrears.
External sovereign debt crises: Official creditors	Credit event: Debt rescheduling, usually in connection with the Paris Club creditors but in the past two decades also includes debt restructuring with Chinese loans.	On Paris Club debt see Trebesch (2012), while on China’s debt restructuring, see Horn, Reinhart and Trebesch (2019)
Domestic debt crises (de jure)	Credit event: It mirrors the description of a sovereign default on external debt, but it may also have other manifestations, such as the forcible conversion of bank deposits (either changing the currency of denomination or their maturity and other terms).	Reinhart and Rogoff (2009) and (2011)

Domestic debt crises (de facto)	Quantitative: In the cases where domestic debt is denominated in the domestic currency, a de facto default (debt liquidation) can occur through inflation and or financial repression. What threshold inflation must cross, or how negative ex-post real interest need to be may to define the event as a “domestic” default” will also be arbitrary. Reinhart and Rogoff (2009) use their definition of an inflation crisis.	Reinhart and Rogoff (2009) and Reinhart and Sbrancia (2015) on calculating financial repression “tax.”
Sudden stop	Quantitative: Sudden stops are defined as periods that contain at least one observation where the year-on-year fall in capital flows lies at least two standard deviations below the sample mean.	Calvo (1998); Calvo and Reinhart (1999); Calvo Izquierdo, and Mejía (2004).
Macroeconomic crises: Depressions	Quantitative: Peak-to-trough declines in real per capita GDP or consumption greater than 10 percent.	Barro and Ursua (2008)
Stock market crashes	Quantitative: Cumulative multi-year declines of 25 percent or more in either real stock returns or real capital losses (nominal total return index deflated by CPI and nominal stock price deflated by CPI, respectively)	Barro and Ursua (2008), () Reinhart and Rogoff (2009)

A note on banking crises in market and financially repressed economies

Most of the literature on financial/banking crises has focused on episodes in partially-to-mostly liberalized *market economies*; these crises usually fit the “boom-bust” pattern described previously. In effect, some studies directly address the channels through which domestic financial liberalization may increase the odds of a banking crisis.¹⁰ For instance, financial liberalization can fuel credit booms in the commercial and shadow banking sectors through the removal of interest rate ceilings, lowering (eliminating) reserve requirements, allowing easier entry to industry, permitting the introduction of new products or repackaging old ones, etc. Furthermore, if domestic liberalization is coupled with capital account liberalization, then integration into global capital markets also permits countries to “import liquidity” by borrowing from abroad (capital inflows).¹¹

Studies of banking crises in *financially repressed economies* are comparatively rare. These episodes usually have different drivers and antecedents. A common cause involves lending to an inefficient and/or bankrupt public sector entity (controlled interest rates also figure prominently).¹² Publicly owned banks may be particularly vulnerable to unprofitable directed credit. And for private banks holding a high proportion of their assets in government bonds or

¹⁰ See Diaz-Alejandro (1985), Kaminsky and Reinhart (1999), and Reinhart and Rogoff (2009).

¹¹ See also McKinnon and Pill (1996).

¹² See Calice, Diaz, and Masetti (2020).

loans, a government default is devastating and part of the so-called doom loop. Even in the absence of an outright sovereign default in its external debt, a government buildup of late payments (arrears) to its domestic bank creditors directly or to its suppliers (who, in turn, may run up arrears on their loans) places financial institutions at risk.¹³

Domestic debt has provided much, if not most, of the COVID-19 deficit financing for governments. This observation is applicable across regions and income groups. Much of the newly issued domestic government debt has been bought by central banks, as these have attempted to ease liquidity, but a great deal of this debt is now in the hands of banks. In light of the weakening balance sheets of many banks and sovereigns, the potential for doom-loop risks has increased as a consequence of the pandemic.

Sovereign default spells and interim serial restructuring

As discussed in Graf von Luckner, Meyer, Reinhart, and Trebesch (2021), while *serial default*, a term coined by Reinhart, Rogoff and Savastano (2003), refers to countries with a track record of more than two default spells or episodes, interim *serial restructuring* refers to restructuring *within* a default spell that does not bring the debt crisis to closure. The longer durations of the default spells of the 1930s and 1980s were particularly prone to serial restructuring. These data underestimate the number of debt restructuring deals in many episodes. This is because existing databases do not include restructurings that were intended to be temporary *by design*. The G20's DSSI in response to the pandemic is a very special example of a temporary measure.¹⁴ On average, it took two restructurings before a sovereign's default was settled "sustainably."

Conglomerate crises

Severe crises seldom travel alone.¹⁵ In particular, sovereign debt crises, more so than banking crises, currency, or stock market crashes, are often of the "*conglomerate*" variety and are usually

¹³ See Bosio, Ramalho, and Reinhart (2021).

¹⁴ For a discussion of some of these temporary deals, see Cruces and Trebesch (2013).

¹⁵ See, for instance, Bauer (2006) et al. on debt, currency, and banking.

associated with economic depressions.¹⁶ A *conglomerate* crisis usually involves three or more of the types of crises described in Table 1, although the composition usually varies by episode.

Reinhart and Rogoff (2014), for instance, center their analysis on the 100 worst financial/banking crises over 1857-2013. “Worst” is defined by the severity of the recession/depression that accompanied the banking crisis.¹⁷ The 25 most severe episodes (the worst of the worst) are listed in Table 2, starting with the most severe. The color-coding (see legend) corresponds to the types of crises that emerged during the episode. Table 2 excludes two other frequent companions to these crises: stock market crashes and inflation crises. The magnitude of the output losses and the duration to recovery will be discussed in the next section.¹⁸

Argentina’s famous 2001 episode (22nd place in Table 2 and shown in orange) provides an example of a particularly encompassing *conglomerate* crisis. The episode involved a banking crisis (with an almost continuous drain of bank deposits through 2001), a spectacular currency crash (as the one-to-one convertible peso was abandoned), a default on external debt, and a default on domestic debt (also as US dollar deposits in the banking system were forcibly converted to pesos). Inflation rose markedly, the equity market sank, and the peak-to-trough decline in real per capita GDP amounted to almost 21 percent, meeting the Barro and Ursua (2008) definition of a depression. Among the “core crises,” the tally was 4 (banking, currency, external sovereign debt, and domestic debt); an expanded tally would score 7 (adding inflation, stock market crash, and economic depression).

A major takeaway from Table 2 is that only 5 of the “worst of the worst” 25 banking crisis episodes were “pure” banking crises, in that these episodes did not involve a currency crash or a sovereign debt crisis of the external or domestic variety. If stock market crashes are also included

¹⁶ See Barro and Ursua (2008), Reinhart (2018), and Table 1 for individual crisis definitions.

¹⁷ Our preferred measure of severity is described in Section 4.

¹⁸ See Reinhart and Rogoff (2009), on a “composite crisis index” with and without equity market crashes.

as a separate crisis category in this exercise, the “pure” banking crises category would almost shrink to the null set.¹⁹

Over the full sample of 100 crises, more than half (56 episodes) of the banking crises were accompanied by a currency crash within a two-year window; post 1900, the share of “twin crises” (banking and currency crises) rises to about 70 percent.

A quarter of the banking crises also involved a sovereign credit event (outright default or debt restructuring). Another 9 involved large-scale bailouts from the IMF and the international community to avoid a sovereign credit event. Combined, over a third (34) of the banking crisis episodes also involved a sovereign debt crisis. Practically all the simultaneous debt and banking crisis episodes but the Greek 2008 crisis were “triplets.” Banking and sovereign debt crises without a currency crash are quite rare, with fully dollarized Panama in the late 1980s providing another example beyond Greece, which remained in the euro area.

In the search for solutions, policy makers must be cognizant that they may be facing multifaceted and interconnected problems. In the context of an external sovereign debt crisis, debt restructuring may be critical. But it will not solve a chronic inflation problem, for example. A rescue of the banks, even a well-designed one, may leave the sovereign in a vulnerable fiscal position or undermine the currency. Even leaving out structural economic problems, such as low productivity or high poverty rates, a *conglomerate* crisis requires a broad toolkit and an integrated approach.

¹⁹ See Kaminsky and Reinhart (1999), Reinhart and Rogoff (2009), and Barron, Verner, and Xion (2021).

Within a two-year window of the banking crisis

Coding	Types of crises
	Banking, currency, and sovereign debt
	Banking and currency ("pure" twin crisis)
	Banking and sovereign debt (relatively rare)
	Banking only

Note: Excludes stock market crashes from the tally and economic recessions/depressions discussed separately.

Source: Reinhart (2018)

Table 2. The “Worst of the Worst” Financial Crises

Crisis Severity: Percent Decline in Per Capita GDP, Duration of Contraction and Years to Full Recovery in 25 of the Worst Systemic Banking Crises, 1857-2018

Year	Country	% change		Number of years		Severity index
		Peak to trough	Peak to trough	Peak to recovery	Peak to recovery	
1	1926 Chile	-46.6	3	16	62.6	
2	1931 Spain	-34.6	9	26	60.6	
3	1983 Peru	-32.0	11	25	57.0	
4	1931 Uruguay	-36.1	3	17	53.1	
5	1893 Australia	-28.0	8	20	48.0	
6	1929 Mexico	-31.1	6	16	47.1	
7	1921 Italy	-25.5	3	21	46.5	
8	1890 Brazil	-21.7	4	21	42.7	
9	2008 Greece	26.3	6	16	42.3	
10	1890 Uruguay	-21.0	2	19	40.0	
11	1981 Philippines	-18.8	3	21	39.8	
12	1980/1985 Argentina	-21.8	11	18	39.8	
13	1929 India	-8.2	9	31	39.2	
14	1929/1933 US	-28.6	4	10	38.6	
15	1994 Venezuela	-24.2	11	14	38.2	
16	1939 Netherlands	-16.0	6	21	37.0	
17	1931/1934 Argentina	-19.4	3	15	34.4	
18	1931 Poland	-24.9	4	9	33.9	
19	1929/1931 Austria	-23.4	4	10	33.4	
20	1981 Mexico	-14.1	7	17	31.1	
21	1920 UK	-18.7	3	11	29.7	
22	2001 Argentina	-20.9	4	8	28.9	
23	2008 Italy	-11.9	6	16	27.9	
24	1980 Chile	-18.9	2	8	26.9	
25	2002 Uruguay	-18.9	4	8	26.9	

Sources: Reinhart and Rogoff (2014) and Reinhart (2018).

III. Recessions, Depressions, and Recovery

The preceding narrative suggests that: (i) the incidence of sovereign debt/fiscal problems is on the rise; (ii) debt crises are often accompanied by currency, banking, and inflation crises of varying severity; and (iii) sudden stops are another risk. Thus, many countries may be facing the risk of a *conglomerate* crisis at time when they are attempting to recover from the ravages of

COVID-19. These observations lead to the related question of how deep will output losses be and how long might it take countries to recover.

To address this question, I first review past recoveries from a variety of crises (including *conglomerate* cases), along the lines of Reinhart and Rogoff (2009, 2014) and Reinhart (2018). Second, I focus on recoveries from the wave of crises in the 1980s in EMDEs and how that experience compares to the prevailing outlook (based on the October 2020 WEO) for the post-COVID-19 recovery. Outcomes of and the outlook for inflation are briefly discussed.

100 crises

The point of departure is a minimalist definition of economic recovery that focuses on how long it takes real per capita GDP to get back to its pre-crisis level. It is silent on possible effects of the crisis on potential output. The measure of the depth of the recession is standard and focuses on the peak-to-trough decline in real per capita GDP.²⁰ We also tally the number of years it takes to reach bottom in each episode. While the view that recessions associated with financial crises are deeper has gained ground in recent years, academic opinion is more divided on how to characterize recoveries from crises.²¹

The duration measure is the number of years it takes to reach the *prior peak* in real per capita income. Fatás and Mihov (2013) and others note that this definition does not capture a return to potential output or to some predetermined trend. Of course, normalizing by population does allow for some time variation in underlying trend output. In contrast to NBER dating of turning points, our approach treats any renewed downturn that takes place before the economy reaches the prior peak as a “double dip” and part of the same cycle (our dating is based on the global peak to date). The severity index, shown in the last column of Table 2, is given by

²⁰ See Barro and Ursua (2008) for a related discussion of the measurement of output collapses.

²¹ For a discussion of these and other issues relating to the measurement of economic cycles, see for instance, Fatás and Mihov (2013), whose analysis is informed by both the modern literature and the early work pioneered at the National Bureau of Economic Research (NBER).

Severity index_i =

-Peak-to-trough % change_i + Number of years from peak to recovery of prior peak_i.

There are numerous other ways of gauging the severity of a crisis as it relates to output (including focusing on shortfalls relative to potential output). The simple measure described lends itself to comparisons across time and space (specifically to eras or countries where population growth is/was significantly greater than what we observe today, particularly in the advanced economies).

A key takeaway from Table 2 is that, apart from sharp output declines, “the worst of the worst” financial and conglomerate crises left a long-lasting imprint on economic well-being. As the table highlights, it often takes per capita GDP more than a decade (three decades is the record) to recover. Of course, in several of these episodes, economics is only a part of the story, as coexisting wars or civil unrest take their own toll on economic activity. For the full sample of 100 crises, Reinhart and Rogoff (2014) report that the average and median numbers of years to full recovery are 8 and 6.5, respectively.

Post-COVID-19 expected recovery in historical context

The preceding evidence encompassed almost two centuries and included advanced and developing economies. I now focus more narrowly on the last wave of debt and financial crises in EMDEs during the 1980s.²² Mexico’s famous default in August 1982 set off a domino effect in already extremely vulnerable developing economies. However, several smaller countries (Costa Rica, Honduras, Liberia, Sudan, Tanzania, Uganda, among others) were already in default in 1981. So, for comparison purposes to the COVID-19 shock, I benchmark 1980 as the pre-crisis equivalent to 2019 (i.e., 1980=2019=100).²³

In 1986, 55 percent of the EMDEs recorded real per capita GDP levels that were below those in 1980. By 1990 the situation had not improved, as 58 percent of EMDEs had real per capita GDP

²² The discussion that follows is based on the October 2020 World Economic Outlook database and projections.

²³ As already noted, even before COVID-19, there were a number of countries in crisis.

below the 1980 benchmark.²⁴ The lost decade adage applied to the majority of emerging and developing economies, many of which were coping with *conglomerate* crises. During this period, reality consistently disappointed expectations, successive downward revisions to economic growth projections were legion.

The experience of the 1980s suggests caution is warranted in projections of post-COVID-19 economic growth, particularly for countries that are already experiencing some variants of financial stress. The October 2020 WEO projections show that by 2025, 29 percent of EMDEs will have per capita incomes below what they were in 2019 (the comparable share for EMDEs is 94 percent in 2020). This is only slightly higher than the share in any “normal” year and spectacularly better than the track record of the 1980s. It is difficult to reconcile this GDP path with the prevalent expectation that there will be a higher incidence of sovereign debt and financial sector problems in the period ahead.

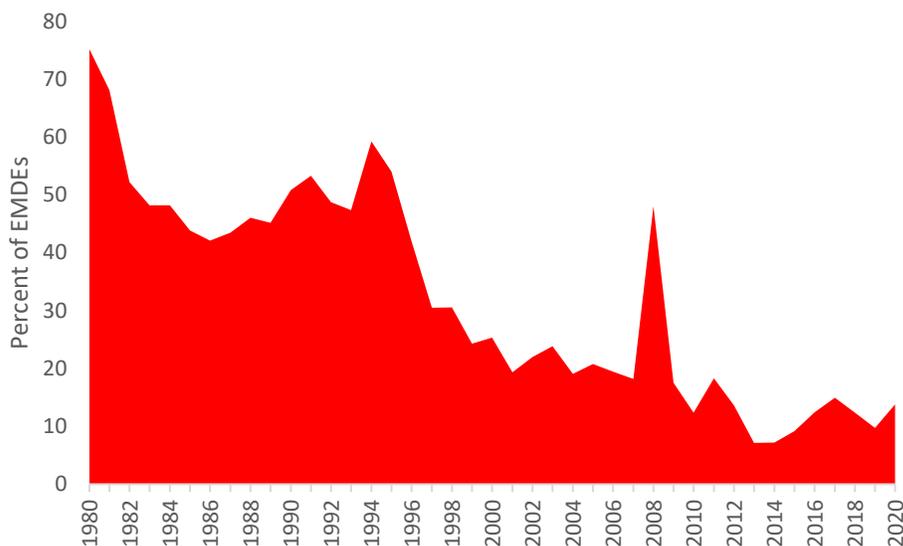
Inflation in some EMDEs may also surprise on the upside. At present, the substantial contraction in aggregate demand acts to dampen inflationary pressures. However, a frequent component of the *composite* crises that I have described involves inflation, a point stressed in Reinhart and Rogoff (2009). A country losing access to external capital markets relies more on domestic funding sources to meet the government’s financing needs. For many developing countries, the scope for internal financing is limited and governments turn more to the revenue for money creation and, in many cases, government arrears.

I am not suggesting a full-blown reversion to the 1980s, when more than half of the EMDEs had double-digit inflation (Figure 2) and inflation targeting was still limited to a handful of advanced economies. The share of countries with double-digit inflation rates has dropped precipitously since then, possibly hitting a low point in 2014 (7 percent of EMDEs registered double-digit inflation that year). In 2020 that share is about 14 percent. But not surprisingly, the re-

²⁴ In any given random year, anywhere between 16 and 21 percent of the countries will have a lower per capita income than five years prior. So the 1986/1981 comparison at 55 percent is more than double the “normal” rate.

appearance of double-digit inflation is clustered in countries that are also experiencing currency crashes and in some cases are already in debt distress.

Figure 2. Share of EMDEs with double-digit inflation rates: 1980-2020 (in percent)



Sources: World Economic Outlook, October 2020 and author's calculations.

Notes: Annual average consumer price inflation.

Currency crashes, on which I have been comparatively silent, are an integral part of inflation dynamics, as the short-lived spike of the Global Financial Crisis highlights in Figure 3. The larger concern is whether currency weakness in a growing number of EMDEs becomes a more persistent feature of the post-COVID-19 landscape that feeds into both inflation and foreign currency debt servicing difficulties for governments and corporates.

IV. The Stages of Debt and Financial Crises and Their Resolution

Turning to the resolution of banking and sovereign debt crises, Laeven and Valencia (2013) document that banking crises often take 3-4 years to resolve.²⁵ Sovereign external debt crises (default spells) take longer, with a post-World War II mean and median of 7.9 and 5 years,

²⁵ Encouragingly, they also document that a significant share of episodes were resolved in a year.

respectively. While each episode has its own dynamics, a key observation is that the road to resolution is marked by different stages of progress (or lack thereof). Table 3 groups these stages into 6 buckets for succinctness.

Table 3. Stages in a sovereign debt or banking crisis gleaned from the historical experience

<p>1. Denial: At the outset of a crisis, it is often asserted that the core problem is liquidity rather than solvency (of course, sometimes it <i>is</i> a liquidity problem). Opaque balance sheets often complicate the diagnosis for both financial institutions (banking crisis) or the government (sovereign debt crisis). <i>Banking crises.</i> NPLs, existing maturity and currency mismatches may be underestimated, for instance. <i>Sovereign debt.</i> The opaqueness in the sovereign balance sheet, may arise from a variety of hidden debt problems arising from existing debt obligations, contingent liabilities, or both (see Box 1).</p>
<p>2. Gambling for resurrection: A solvency problem is strongly suspected or may even be known but not publicly acknowledged. But there is a hope of a miraculous economic recovery or large-scale bailout. The problem continues to be diagnosed as a liquidity problem. Illiquidity may be addressed by fresh lending/borrowing. It is during this period, that the maturity composition of debt often changes markedly, with a skewing to short-term debt. <i>Banking crises:</i> At the private level, this stage can go on for extended period (as banks evergreen problem assets). This practice usually prolongs the credit crunches that often follow banking sector problems, as “fresh: lending is residual. <i>Sovereign debt:</i> In the early stages of the 1980s crisis, bridge loans (Cruces and Trebesch, 2013, Appendix on excluded cases) were commonplace. As Figure 4 <note to provide figure 4> highlights, average maturities on outstanding external debt declined. Broner, Lorenzoni, and Schmukler (2013) present evidence of the sharp steepening of the yield curve prior to EM crises. Roll-over risks are often overlooked or underestimated. IMF and multilateral lenders enter (or re-enter) the scene, as financing gaps widen.</p>
<p>3. The morning after gambling: The solvency problem of the financial institution(s) or sovereign is openly acknowledged. <i>Banking crises:</i> Governments will begin the process of bailing out institutions, merging others, setting up bad banks, etc. If the extent of the problems is not yet fully known initial actions may fall short of what is needed. (Note: Skip to stage 6) <i>Sovereign debt:</i> There is the admission that debt restructuring is needed. The eternal divide between debtors, who want haircuts and the creditors, who want repayment ensues.</p>
<p>4. Early shallow restructurings (sovereign debt): These early attempts to restructure are often characterized (some cash flow relief). For debtors, these restructurings a short-lived reprieve; for creditors time to (gradually) adjust their exposure and leverage to the distressed debtors. Overoptimistic economic projections also contribute to the observed undershooting in the magnitudes of debt relief Delay also helps both sides bargain for larger infusions from official creditors (Bulow and Rogoff 1989). See also Graf von Luckner et. al. (2021) for a summary of the recent literature on the factors driving delays in debt crisis resolution.</p>
<p>5. That did not work, let’s repeat a variant of 4—maybe it will work this time: (sovereign debt): This process can be repeated several times, as documented in Cruces and Trebesch (2013), Meyer, Reinhart, and Trebesch (2020). Within a single sovereign default spell, there have been as many as eight serial restructuring deals; the median is 2 (see Graf von Luckner et. al., 2021).</p>
<p>6. Bite the bullet--resolution: Measures commensurate with the scale of the problem are adopted, restoring sufficient balance sheet health for financial institutions (banking crisis) or governments (sovereign debt). <i>Banking crises:</i> While there are cases where a comprehensive clean-up of financial sector balance sheets is spread out over many years (Japan’s crisis in the early 1990s is an example), banking crisis resolution is speedier than its sovereign debt crisis counterpart.</p>

Sovereign debt: Through the process of elimination and the passage of time creditors arrive at the conclusion that significant debt reduction is necessary to “cure” the debt problem and restore sustainability. Debtors had usually reached that conclusion years earlier. The average duration of default spells over 1946-2020 is 7-8 years. As noted, many of these default spells involve multiple intermediate debt restructuring deals (see Graf von Luckner et. al., 2021).

Denial: At the outset of banking and sovereign debt problems, it is often asserted that the problem is liquidity, not solvency. Sometimes, of course, it is a liquidity problem. Ex ante it is often difficult to diagnose whether the adverse shock triggering the alarm is temporary or permanent (or more accurately, very persistent). Overoptimism on the “temporariness” of the shock can lead to inaction on the policy front. Opaque balance sheets (sovereign, central bank, corporates, banks, or any combination of these) can also contribute to misdiagnosing the problem. Hidden debts, in their countless guises, are usually still “hidden” at this stage. Box 1 illustrates, with examples from past crises, the complexity and time variation in the hidden debt problem.

As noted earlier, a variant of the hidden debt problem for financial institutions (banks and shadow banks) in the context of the COVID-19 crisis is the possible underreporting of NPLs in an environment when repayment has been suspended temporarily. But as grace periods come to an end, more will be revealed on whether the problem facing countless firms and households is insolvency rather than illiquidity.

On the sovereign debt side, the hidden debt problem is complex, as explored in Box 1. During the period of relative prosperity that lasted until around 2014, many low-income countries accumulated significant debts to China and other non-Paris Club creditors that are relatively new in this marketplace.²⁶ A substantial share of these debts went unrecorded in major databases and was not on the radar screen of credit rating agencies. External borrowing by state-owned (or guaranteed) enterprises, which have much more uneven reporting standards, also escalated.

²⁶ See Horn, Reinhart, and Trebesch (2019).

Public domestic debt (which was a minor issue in the 1980s debt crisis in developing countries) is much larger now and data availability lags its external counterpart (particularly on ownership).

Box 1. Hidden debts: Unpleasant surprises that when revealed have undermined the credibility of existing safety nets and may set runs in motion.

Central bank debt: To this day, even when the numbers are published, these are not included as part of *general government debt* (i.e., Argentina's short-term Lebac's). In the event of euro area exits, Target 2 balances (currently running at around 20%-40% of GDP for Greece, Italy, Portugal, and Spain) are *external* central bank debt. *Unseen:* In June 1997, the new Thai finance minister 'discovered' that the Bank of Thailand had already spent US\$28 billion of US\$30 billion of its international reserves in the course of forward market interventions to defend the baht.

Non-securitized, floating debt (arrears): Unpaid bills to suppliers and, in more desperate cases (the Russian Federation 1998), unpaid pensions and wages to public sector employees.

Misreporting and other off-balance sheet omissions: Greece-Goldman Sachs debt swaps: Greek dollar and yen-denominated debt was swapped at historical euro exchange rates to cosmetically reduce the overall level of debt.

Debts to China: Even the most comprehensive databases on external debt, such as the World Bank's *Debt Reporting System*, did not fully capture liabilities of governments and SOEs in numerous low-income countries, over much of the 2000s.

Offshore derivative operations of banks: These can leverage banks' holdings of government debt (a significant hidden debt problem during the Mexican banking/peso crisis of 1994-1995). With Mexican bonds (Tesobonos) as collateral, Mexican banks took on short-term dollar debt, which was for the most part unhedged. As the value of the collateral sank, margin calls increased along with rollover risk.

Implicit guarantees and moral hazard:

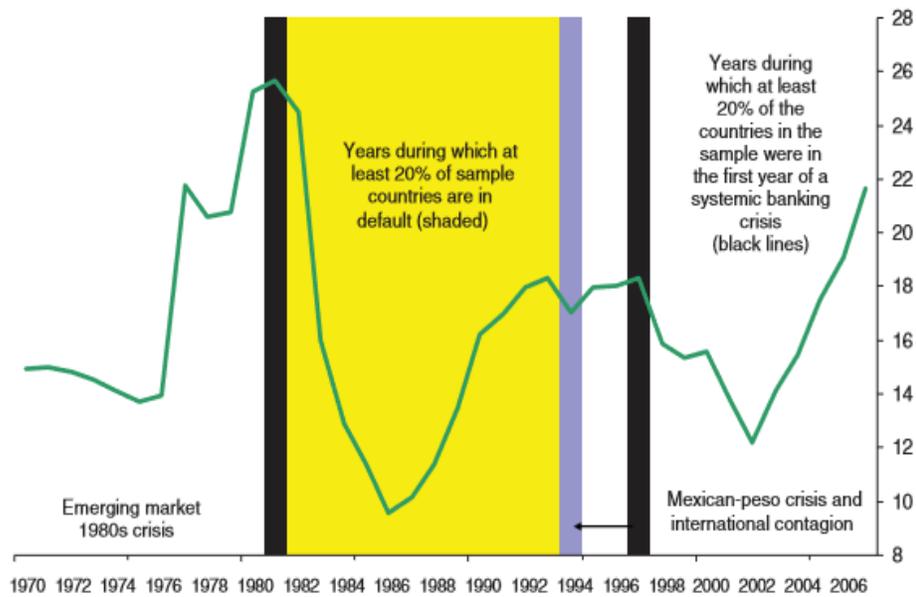
Private sector debt, especially external debt of banks (Diaz Alejandro, 1985) can overwhelm an otherwise healthy fiscal situation (Chile 1981, Iceland, Ireland, Spain, 2007-2008); corporate debt (Korea and Indonesia, 1997). Puerto Rico's "appropriation debt."

Puerto Rico (PR) began issuing "Appropriation bonds" in 2000 indirectly through *government-owned entities* and made repayment contingent upon the legislature's appropriating funds for this purpose. These bonds are not counted as debt under the debt limit. Yet PR appropriation debt was, for practical purposes, guaranteed by the government and charged to its taxpayers.

Gambling for resurrection is well known in the literature on banking and denotes excessive risk-taking by troubled banks. The management is aware of the solvency problem and may borrow (usually short-term and at high rates) to pay off depositors (Velasco (1987) stresses moral hazard), offer ever higher deposit rates to attract depositors (Rojas-Suarez 2002), and lend to short-term risky projects in the hope that the "gamble" will pay off. It is difficult to document when these strategies have paid off and a crisis was avoided for individual banks. At the aggregate sectoral level, many of the banking crises in the 100 discussed previously were

preceded by surges in banks' offshore borrowing at shorter maturities. This is captured in Figure 3 for the aggregate EMDEs, which shows the share of short-term gross external debt (public plus private) on the eve of banking and sovereign external debt crises. More granular country-specific data are presented in Reinhart (2010).

Figure 3. Share of Short-term Gross External Debt (Public plus Private): Emerging Markets, 1970–2009 (in percent)



Source: Reinhart and Rogoff (2011).

For sovereigns, gambling for resurrection has also involved taking on costlier and usually shorter-maturity debt (as in Figure 3). Broner, Lorenzoni, and Schmukler (2013) present evidence of the sharp steepening of the yield curve prior to EM crises. Rollover risks are often overlooked or underestimated. The IMF and multilateral lenders may enter (or re-enter) the scene, as financing gaps widen. Cruces and Trebesch (2013, appendices) document the frequent reliance on “bridge loans” during the early stages of the 1980s EMDE debt crisis.

The shift toward short maturities provides the classic setup for a “run.” The run can be on bank deposits or in other markets (Reinhart 2018). On deposits, it can be along the lines of Bryant (1980) or Diamond and Dybvig (1983) or other asset markets (see Chang and Velasco 2000; Alan and Gale 2007; Gorton 2010). On the creditor side, the private creditors often play that game by lending short and at very high yields. When repayment is not forthcoming, their answer is “we thought we could have return without risk.” And for the multilaterals, the tendency is to try to help governments at that stage, often effectively lending into what is a non-sustainable debt. The third stage is the morning after the gambling, and the realization that restructuring is needed. The cast of characters has changed, but the problems today are very similar to the ones in the past, which are that creditors do not want haircuts and debtors need debt relief.

The morning after gambling, the solvency problem of the financial institution(s) or sovereign is acknowledged. *Banking crises*: Emergency measures, such as bank holidays, some form of deposit freeze, or capital controls, may be adopted. In some semi-dollarized economies, foreign currency bank deposits were forcibly converted to local currency; maturity conversion of deposits (lengthening) of governments will begin the process of bailing out institutions, merging others, setting up bad banks, etc. For a crisis-by-crisis sketch of some of the policy responses adopted, see Laeven and Valencia (2013). If the extent of the problems is not yet fully known, initial actions may fall short of what is needed. (Note: Skip to stage 6.)

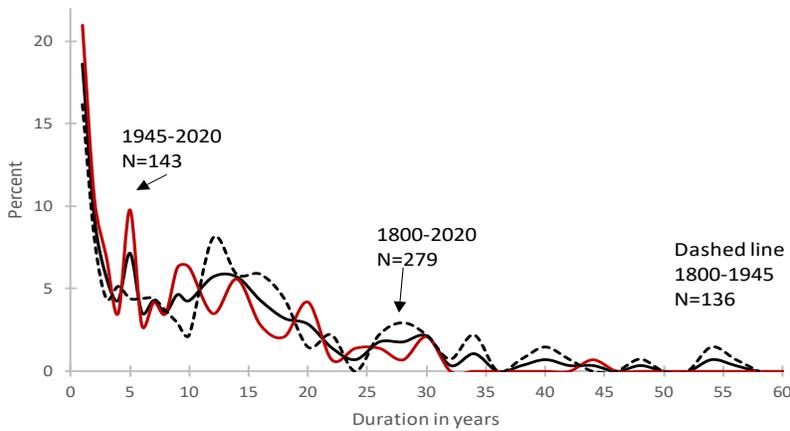
Sovereign debt: There is the admission that debt is unsustainable—that there is a solvency problem. The country may openly default or begin to seek a debt restructuring. In either case, this point marks the start of the default spell. The eternal divide between the debtors, who want haircuts, and the creditors, who want repayment, ensues. Complicating matters, the awareness of hidden debt problems (as in Box 1) starts to emerge.

Default spells often include “debt with drama” and “debt without drama.” The drama is usually reserved for the outset, as the crisis erupts. But debt crises have lingered without drama for years.²⁷ Countries shut out of capital markets often face all kinds of derivative problems (lack of domestic credit, buildup of arrears, sluggish growth, reliance on inflationary finance, etc.). Debt without drama may attract little attention if the country(ies) affected are not “systemic,” in terms of impacting the working of global capital markets. Figure 4, from Graf von Luckner, Meyer, Reinhart, and Trebesch (2021), presents the marginal and cumulative frequency distributions of the duration (in years) of 279 external default spells (excluding repudiation cases) in 113 countries over 1800-2020. The average default spell for the full sample lasted ten years, while the median is seven years. These descriptive statistics highlight the slow-moving nature of debt crisis resolution, an issue I will address in Section IV. A significant share of the longest multi-decade episodes involved wars or internal civil conflict and predate the 21st century. As shown, since the end of World War II, default spells have become shorter, lasting on average 7.9 years, with a median duration of 5 years.

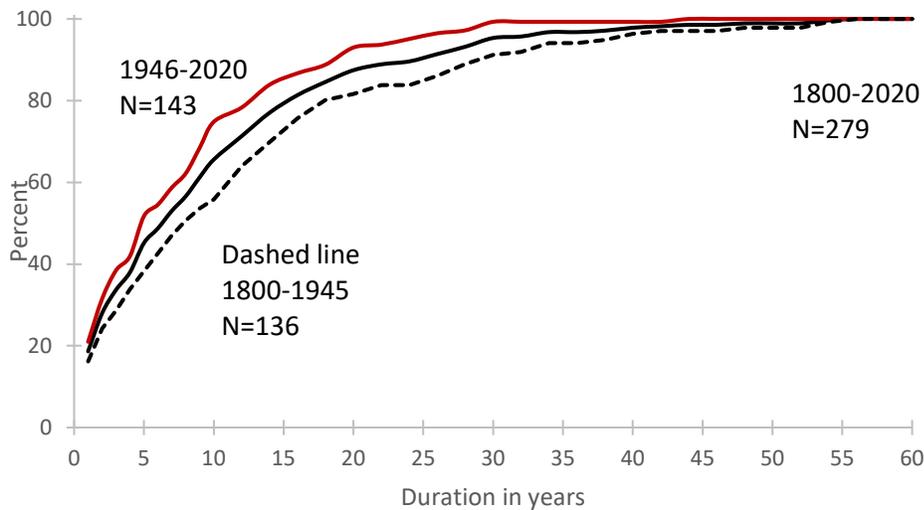
²⁷ See Reinhart and Rogoff (2009).

Figure 4. The duration of defaults: 1800-2020

Marginal frequency distribution



Cumulative frequency distribution



Source: Farah-Yacoub, Graf von Luckner, and Reinhart (2021).

Early shallow restructurings (sovereign debt): These early attempts to restructure are often characterized by the provision of some cash flow relief without necessarily reducing the intertemporal debt burden. For debtors, these restructurings provide a short-lived reprieve; for creditors, it provides time to adjust their exposure and leverage to the distressed debtors more gradually. Overoptimistic economic projections (see Ghosal and Miller 2017) also contribute to the observed undershooting in the magnitudes of debt relief. Figure 6, from Reinhart and

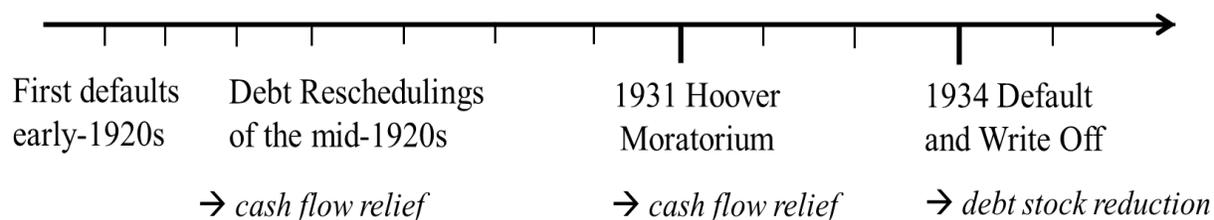
Trebesch (2016), illustrates the protracted multi-stage process of sovereign debt restructuring during the historical episodes (the interwar years and the 1980s) where sovereign defaults and debt challenges escalated.

Delay also helps both sides bargain for larger infusions from official creditors (Bulow and Rogoff 1989). Graf von Luckner, Meyer, Reinhart, and Trebesch (2021) provide a summary of the recent literature on the factors driving delays in debt crisis resolution. Creditors' coordination problems that lead to holdouts and increased debt litigation are among the factors they highlight.²⁸ In addition, shifts in debtor bargaining power can lead to longer default spells, as can business cycle conditions in the creditor country (Benjamin and Wright 2009; Asonuma and Joo 2020). Trebesch (2019) focuses on political instability in the debtor country as a factor that can delay and derail an effective debt restructuring. This problem can be self-reinforcing, as economic crises often undermine the political situation, which in turn, increases uncertainty about the current government's ability to deliver the future reforms needed to restore solvency.

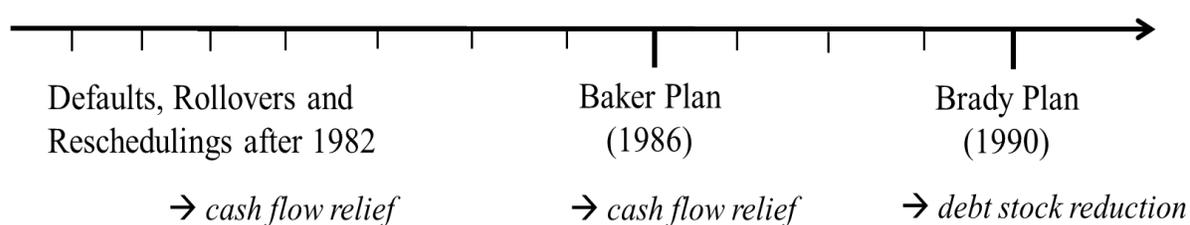
²⁸ See Pitchford and Wright (2012), Fang, Schumacher, and Trebesch (2021), Schumacher, Trebesch, and Enderlein, (2021).

Figure 6. Stylized crisis timeline of the 1920s/1930s and 1980s/1990s
 Source: Reinhart and Trebesch (2014)

1920s/1930s



1980s/1990s



Source: Reinhart and Trebesch (2014)

That restructuring did not work, let's repeat a variant of it—maybe it will work this time:

Sovereign debt: There are cases where creditors and debtors have come to very successful agreements relatively quickly, but the “typical” default spell involves, on average, two restructurings (the post-1920s median is also two), as documented in Graf Von Luckner, Meyer, Reinhart, and Trebesch (2021).²⁹ Poland holds the record, as during its lengthy default spell (1981-1994) there were eight debt restructurings (seven of these interim). The Democratic Republic of Congo, Jamaica, and Nigeria follow closely with seven restructurings each. Chad is

²⁹ For examples of one-time successful restructurings, see Cruces and Trebesch (2013) and the update in Asonuma and Trebesch (2016).

seeking its third restructuring since 2014, highlighting that serial restructurings are not a relic of the past.

Stage five, thus, looks a lot like stage four. The rationale offered as to why a similar restructuring may work this time varies not only considerably across countries, but also for the same country over the course of the default spell. This process can be repeated until (ultimately) the restructuring is successful in restoring debt sustainability in the “bite the bullet” stage. Serial restructurings often start with deals that offer some cash flow relief and have often (but not always) ended with face value reductions.

Bite the bullet: For *banking crises*, this stage is when bank balance sheet health is restored by the write-off or sale of nonperforming assets. The end or major reduction in “evergreening” allows new lending to resume. Indeed, in dating the “end” of a banking crisis for cases where a decisive event (a transfer of bank NPLs to a “bad bank,” for instance), Laeven and Valencia (2013) mark the end through the resumption of credit growth.

Sovereign debt crises are “cured” when debt sustainability and renewed capital market access are restored (the extent of access varying substantially across countries). At the bite-the-bullet stage, it is widely recognized that wealth has been lost, and that the probability of substantial repayment is nil. Creditors usually reach that point after alternatives have failed. The Brady Plan in the early 1990s, for mostly middle-income economies, and the HIPC Program that was launched in 1996 for the low-income countries brought closure to many countries whose debt crises started in the early 1980s. As Meyer, Reinhart, and Trebesch (2019) document, almost all defaults in the past 200 years have been solved by a debt exchange of old into new debt at a discount, with an average haircut to creditors of 44 percent and a standard deviation of 30 percent. For the post-1970 sample, haircuts average 39 percent.

In a related piece, Meyer, Reinhart, and Trebesch (forthcoming) offer “rules of thumb” in determining the size of the haircut. There are four key determinants of haircut size: the initial stock of debt (the larger the initial stock is, the larger the haircut is), per capita income (the poorer the country is, the bigger the haircut is), the cumulative decline in real GDP between the beginning of the debt crisis and its resolution (the steeper the contraction is, the bigger the haircut is), and the duration of the default spell (the longer time it takes, from the beginning of the debt crisis to the resolution, the bigger the haircut is). The last of these should, in principle, encourage creditors to expedite the resolution process.

It is noteworthy that even after significant haircuts, Meyer, Reinhart, and Trebesch (2019) calculate that real excess ex-post rates of return (over the risk-free rate) on external sovereign debt for their sample are about 3 percent. This is not to suggest that the next decade will deliver 3 percent excess returns, as there is significant time variation in the two-century sample. In the 1930s and 1980s, two decades with a significant increase in the incidence of sovereign defaults, ex-post returns fared poorly.

Expediting the resolution process

As discussed, there is little evidence to support the view that private and sometimes official creditors will be willing to accept large losses quickly. So, what can be done to make debt restructuring more expedient? In my recent pieces with Bulow, Rogoff, Reinhart, and Trebesch (2020) and Pazarbasioglu and Reinhart (2021), we suggest some possibilities:

Realistic economic forecasts that incorporate downside risks. Realistic growth forecasts are critical to avoid underestimating a country’s near-term financing needs and overestimating its capacity to service its debt commitments. IMF historian James Boughton (2001) notes that during much of the 1980s debt crisis, overoptimistic growth expectations persisted, especially in Latin America. Realistic forecasts, particularly recognizing the fragility of highly indebted countries, can speed the resolution of any crisis. Earlier detection of insolvency and identification of cases in which large write-downs are necessary cannot guarantee a faster resolution but are a step in that direction.

New legislation to support orderly sovereign debt restructurings. Legal steps in jurisdictions that govern international bonds (importantly but not exclusively New York and London) or where payments are processed can contribute to more orderly restructuring by promoting a more level playing field between sovereign debtors and creditors. For instance, national legislation can cap the amounts that may be reclaimed from defaulted government bonds bought at a deep discount. In 2010, the United Kingdom enacted such a law for countries taking part in the Heavily Indebted Poor Countries (HIPC) debt relief initiative, while Belgium in 2015 passed the so-called Anti-Vulture Funds Law, which prevents litigious creditors from disrupting payments made via Euroclear. It would also energize legislation to facilitate a majority restructuring, which would allow a sovereign and a qualified majority of creditors to reach an agreement binding on all creditors subject to the restructurings.

More transparency on debt data and debt contracts. It is of utmost importance that the World Bank, the IMF, and the G20 continue to insist on strengthening the transparency of debt statistics. A new and significant complication in assessing the external indebtedness of many developing economies involves China, which has become the largest bilateral creditor in recent years, and its lending is often shrouded in nondisclosure clauses.³⁰ More granular data on private sector creditor exposure may facilitate, in case of debt distress, more expedient creditor-debtor negotiations and allow both creditors and governments to identify which bonds are at risk of holdout or litigation tactics. An encompassing transparency initiative would include, for instance, full disclosure on sovereign bond ownership as well as credit default swaps that shift lender composition overnight. The accounts for the country itself must become more comprehensive, with improved data on domestic debt and debt owed by state-owned enterprises. Accounting for pension burdens is also increasingly important.

V. Final Reflections

Extremely accommodative global liquidity conditions mitigate some of the risks discussed. Unlike the 1980s and 1930s, real ex-post interest rates are close to historic lows. Furthermore, in the major advanced economies, central banks' tolerance for higher interest rates may decline

³⁰ See Gelpern, Horn, Morris, Parks, and Trebesch (2021), who are the first to analyze the features of China's overseas lending contracts.

further as levels of public and private debt climb to new highs. Low interest rates have, since time immemorial, encouraged risk-taking and fueled the search for yield. Other things equal, these push-factors may support private flows to EMDEs.

Other things have not been equal. For EMDEs as a class, risk premia have risen, and a record number of sovereigns have been downgraded. Earlier in 2020, El Salvador issued a 30-year US dollar bond with a 9½ percent coupon. Coupons above 8 percent have not been uncommon. It will take a great deal of sustained growth to square (the much-discussed) $r - g$ debt sustainability calculus in these cases.³¹

Multilateral institutions may also face their biggest challenge since the 1980s. The crises in the 1990s in Mexico and East Asia were significant but contained. Following the GFC, the size of the IMF programs for Greece, Iceland, Ireland, and Portugal were record-shattering but still focused on a handful of countries. Importantly, those cases also counted with substantive financial support from Europe. The pandemic's damage is much more diffuse and in many cases the financing gaps are likely to prove persistent.

Conglomerate crises are typically associated with deep, protracted recessions. Old challenges that have been thought dead or tamed in some EMDEs (i.e., currency instability and higher inflation rates) may resurface. Dealing with conglomerate crises will require an expanded toolkit, an open mind, and an encompassing integrated approach.

The economic downturn, as we are seeing today, leads to collapses in government revenues and the need for further expenditure (fiscal finances deteriorate). Worsening matters is what is beneath the surface, as in the classic Diaz Alejandro paper, "Goodbye Financial Repression, Hello Financial Crash." Often, the government sits on a time bomb of contingent liabilities of

³¹ Favorable debt dynamics require that the real interest rate on debt, r , is less than real growth, g .

private debt, which the government, in its efforts to support the banking sector, will end up assuming. We have seen this time and time again.

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