



Chapter 11 for Countries?

Sovereign default risk has been growing, yet the world lacks an adequate mechanism for averting debt crises. It might be time to resurrect a plan modeled on the U.S. Bankruptcy Code.

BY SATYAJIT CHATTERJEE

For the past 40 years or so, every decade seems to have brought its own brand of international debt problems. In the 1980s, emerging market economies, led by Mexico, defaulted on their debt to private banks. In the 1990s, the fast-growing economies of Thailand, Indonesia, and South Korea teetered on the brink of default. The new millennium brought the 2007–2008 financial crisis, the worst the U.S. had experienced since the Great Depression. And this decade has brought the ongoing Greek debt crisis, which for about six months in 2011 had engulfed Italy, Spain, Portugal, and Ireland and threatened to destroy the euro (Figure 1).

Although outright default on foreign borrowing is relatively rare — Argentina, Russia, Ecuador, and Greece have been the only countries to default on their foreign obligations in the past 25 years — even the threat of sovereign

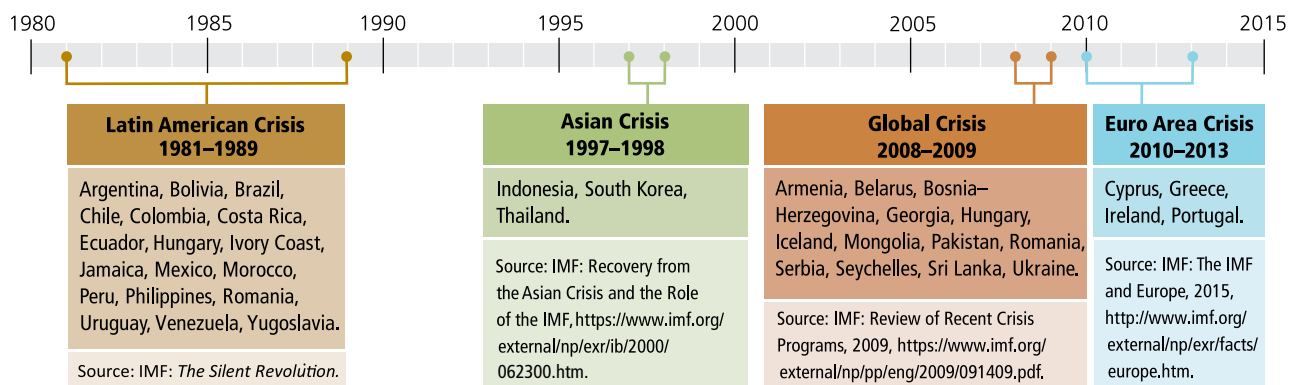
default can be very disruptive for countries that experience it.¹ Greece, sadly, is a poster child for the chaos that can befall a country when investors begin to doubt its ability to pay its bondholders. Greece was already suffering a recession in 2010 when it became clear to investors that its government was under severe budgetary pressure. Greece’s debt was eventually restructured to avoid outright default, but the process was lengthy and extracted a heavy toll on the Greek economy: By the end of 2013, Greece’s gross domestic product had fallen 25 percent below its GDP in 2010, and its unemployment rate had climbed to 27 percent. Then, the recovery that had begun in 2014 collapsed

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FIGURE 1

Debt Crises over the Decades

Since 1980, roughly one-fifth of the world’s nations have had to resort to adjustment loans from the International Monetary Fund.



amid the political fallout from five years of harsh economic policies, and in 2015 Greece defaulted on its interest payments to the International Monetary Fund (IMF). Although an exit from the euro was averted, Greece's economic situation remains dire.

In the wake of the Asian financial crisis of the 1990s, the IMF had proposed a formal sovereign debt restructuring mechanism (SDRM) that would have permitted an overly indebted country to comprehensively restructure its foreign debt quickly and equitably. Modeled on the segment of U.S. corporate Bankruptcy Code commonly referred to as Chapter 11, the proposal was intensely debated but ultimately shelved as it failed to garner the requisite support among IMF member countries, the U.S. included. But since then, the resurgence of international debt problems, in particular Greece's experience, has revived interest in adopting a sovereign debt restructuring mechanism.

As this article will explain, the risk of sovereign debt crises is expected to rise over time, yet the current system for dealing with both the threat and reality of sovereign default is ill-suited to a world in which the primary source of financing government capital projects is private investors in other countries. Moreover, it is uncertain whether the main policy initiative pursued by the U.S. in lieu of the SDRM has lowered the likelihood of protracted and costly sovereign debt restructurings. As we will see, the restructuring mechanism the IMF had proposed in 2003, or some variation of it, continues to be worthy of consideration.

THE RISK OF SOVEREIGN DEFAULT IS RISING

For much of the developing world, the benefits of borrowing in the capital markets of advanced economies are immense. The demand in developing countries for investments in basic infrastructure such as electrification, communications, transportation, and education and health facilities far outstrips what they can fund internally. At the same time, new investment opportunities in advanced economies are growing more slowly than in the past. In the years to come, the benefits of borrowing from abroad will entice more and more developing countries into the world's international capital markets, and investors looking for high returns will gladly welcome them.

But more borrowing from abroad generally means a higher likelihood of default. An obligation owed to creditors is a fixed sum, but the amount of money available to repay that obligation fluctuates randomly. Natural disasters, wars, recessions, and political upheaval interfere with a country's

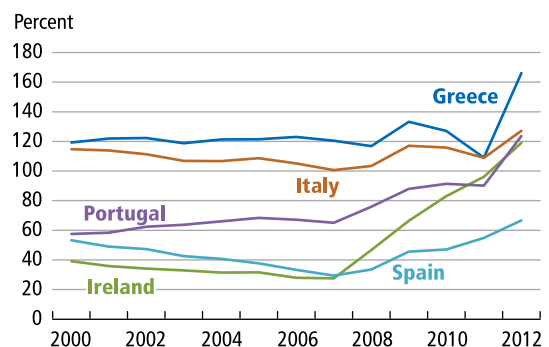
ability to meet its obligations. Since emerging economies tend to be more volatile, sovereign debt crises should become more frequent as more capital flows to the developing world.

In addition, some features of the sovereign debt market make emerging economies particularly prone to default. Borrowing in the capital markets of New York, London, or Tokyo means borrowing in dollars, sterling, or yen. But borrowing in a foreign currency exposes the country to *currency risk* — the risk that its domestic currency will fall in value relative to the currency in which its debt is denominated. Currency devaluations can greatly increase the burden of foreign debt overnight as more domestic currency is needed to repay the same amount of foreign debt, and a country can find it hard, even impossible, to pay its bondholders.²

As the events of the past seven years have shown, rapidly growing national debt as a share of a country's gross domestic product can bring even advanced economies to the brink of default. For advanced economies, the threat of insolvency comes from long-term demographic trends that are rapidly increasing their national debt burdens: Aging populations are increasing government spending on social security programs, public employee pensions, and health-care subsidies while depressing tax revenue growth as labor force participation declines. The global recession that followed the 2007–2008 financial crisis contributed to these trends by temporarily shrinking government revenues and rapidly raising national debt levels (Figure 2).³

Another troubling aspect of sovereign default is the much-feared problem of *contagion*. When Argentina could not pay its debt and sank into default in 2001, Uruguay also suffered a recession, devaluation, and foreign debt crisis

FIGURE 2
National Debt Loads Face Short- and Long-Term Pressure
Sovereign debt to gross national product.



Source: The World Bank's World Development Indicators.

because its exports to Argentina, Uruguay's main trading partner, collapsed. The interconnections among countries resulting from trade links become the conduits through which the "virus" of sovereign default jumps from one country to another. Sometimes the virus spreads through financial links.⁴ As trade linkages continue to widen and as global financial markets increase in sophistication, such links can be expected to permeate world capital markets. In this interconnected world, sovereign defaults are unlikely to be isolated events; they are more likely to come in waves.

Thus, no matter where in the world one looks, the likelihood of sovereign debt crises is on the rise. How is the international financial system dealing with a country's inability to service its foreign debt? As we will see, the current arrangement is not well adapted to a world where countries borrow vast sums of money from private foreign investors.

THE CURRENT ARRANGEMENT IS FLAWED

What happens when a country runs into trouble and is in danger of being unable to make timely payments to its foreign creditors? Under the current arrangement, it does two things. First, it seeks to *restructure* its existing debt, which means asking its creditors to accept a partial write-off of their loans or, failing that, to accept delayed repayment. Second, it seeks temporary help from the IMF, which was set up after World War II specifically to dispense such help. The IMF might advance the country an *adjustment* loan and simultaneously force it to cut its fiscal budget in order to generate surpluses that are then used to reduce its foreign debt to a more manageable level. Once the country resumes making timely bond repayments, international capital markets will again be willing to buy new issues of its bonds, which the country can then use to pay off its IMF adjustment loan.

As originally conceived, the IMF was intended to support a fixed international exchange rate system.⁵ Reflecting this narrow focus, IMF rules initially forbade it from advancing loans to a country that had defaulted before reaching a restructuring agreement with its creditors. An adjustment loan was advanced only if the country was current on its obligations but was negotiating with its creditors for a restructuring and was therefore temporarily unable to issue new bonds in world capital markets. The arrangement initially worked well, since at the time, a country's foreign debt was generally owed to foreign governments, which had an implicit agreement to negotiate repayment quickly and in good faith.

But this situation changed dramatically as private capital resumed flowing during the boom years of the 1960s and early 1970s.⁶ When Mexico and other developing countries defaulted in the early 1980s, the bulk of their foreign debt was owed to commercial banks, not governments. And reaching a restructuring agreement with the banks proved to be a huge challenge. As the years passed, the pressure on governments to get involved mounted. In 1989, the banks accepted the fact that the countries were never going to be able to repay their debts in full and, in return, agreed to accept bonds collateralized by U.S. Treasury securities as partial repayment on the defaulted loans.⁷ Because the bonds were backed by U.S. government securities, the market value of the bonds was greatly enhanced, which helped contain the banks' losses.

The resolution of the Latin American debt crisis was a defining moment in the evolution of postwar international borrowing and lending. The IMF had to change its rules to permit adjustment loans to a country that had yet to reach a settlement on its defaulted debt. This policy of lending into arrears made it possible for the countries to purchase the U.S. Treasury securities that backed the bonds offered to the commercial banks in the settlement. Thus, the almost decade-long impasse was ended by effectively orchestrating a bailout of the commercial banks with IMF help.

However, the much-needed resolution of the Latin American debt crisis left a thorny legacy for the IMF. On the one hand, lending into arrears institutionalized a mechanism for bailing out foreign creditors following a default, although the IMF is loath to routinely activate this policy. On the other hand, the bailout increased pressure on the IMF for more bailouts.⁸ This dilemma led the IMF to propose a formal mechanism that would smooth out the negotiation process between creditors and countries in danger of falling into default and thereby encourage them to seek a timely restructuring of their unsustainable debt, while reducing the need for the IMF to become a party to bailouts of private creditors.

HOW WOULD THE SDRM PROMOTE ORDERLY RESOLUTIONS?

Since debt crises occur only when countries lack the money to make timely debt payments, any money that goes to pay one creditor necessarily comes at the expense of some other creditor. This basic fact pits one creditor against another, with potentially adverse consequences. In the corporate context, a creditor has the incentive to not

agree to the restructuring plan (making him a *holdout*) if he believes that his threat of intransigence will compel other creditors to accept bigger losses in favor of his getting more. Such uncooperative behavior can unleash a war of attrition among creditors — each holding out in the expectation that others will capitulate first — and greatly delay agreement on a restructuring plan. Since delays hurt all creditors, one key purpose of bankruptcy law is to constrain the rights of individual creditors for the benefit of all creditors. The U.S. bankruptcy code serves this purpose by giving the bankruptcy judge the authority to bind all creditors to a restructuring plan approved by a majority of creditors — a cramdown provision. Thus, an individual creditor gains nothing from acting opportunistically when others act cooperatively.

A similar holdout problem can delay restructuring of sovereign debt. The typical strategy of a holdout creditor is to refuse to participate in a restructuring and to simply wait for other creditors to agree to a restructuring plan and then sue the country for full repayment. Because the country's debt burden is lower following a restructuring, the government may think it advisable to pay off the holdout and avoid the nuisance of a suit, giving all creditors an incentive to hold out. Again, the resulting delay ends up hurting both creditors and the debt-strapped nation. Thus, as in the corporate context, a legal mechanism is required to counter opportunistic behavior on the part of individual creditors.

The sovereign debt restructuring mechanism that IMF officials proposed to their governing body in 2003 was designed to provide this legal mechanism.⁹ It gave a country the right to unilaterally activate the mechanism if it believed that its current debt exceeded its capacity to repay (in U.S. bankruptcy law, the corresponding provision is known as *filing for reorganization*). Upon activation of the mechanism, the country would be required to cease all payments to creditors, and the creditors were enjoined from litigating for full repayment (a *stay*) and would be required to register their claims. Once all debts had been registered and verified, the sovereign would be tasked with coming up with an acceptable restructuring proposal (a *reorganization plan*). During this renegotiation stage, the country could get new loans that were outside the scope of the restructuring process and that would have priority for repayment over all existing loans, provided a majority of creditors approved such financing (*priority* or *debtor-in-possession* financing). If creditors holding 75 percent of all claims accepted the plan, it would become binding on all parties, including any dissenting creditors (a cramdown). The mechanism envisaged a dispute resolution forum composed of impartial experts who

would mediate disputes that arose along the way. To give the mechanism legal force, its adoption would occur via a treaty among IMF member countries and, once adopted, would govern the resolution of payment problems on all existing and future sovereign debt.

The key to understanding the structure of the mechanism is the cramdown feature. In default, individual creditor rights are constrained to eliminate the holdout problem. Given this suppression of their rights, all other features of the mechanism are designed to protect creditor interests. The mechanism is not an exact copy of U.S. bankruptcy law: There is no bankruptcy judge who can impose a reorganization plan on all creditors. The role of the dispute resolution forum is to facilitate agreement among creditors, not to impose any particular plan on them. Instead, the mechanism requires a majority of creditors to agree to the restructuring plan, which then becomes binding on all creditors.

Ostensibly, the mechanism does not ascribe a special role to the IMF, but it is understood that the IMF would have an important role to play. A country that activates the mechanism loses access to world capital market but may greatly need temporary priority financing. The entity most well placed to provide such temporary priority financing is the IMF. As per its rules, the IMF's priority financing would come with conditions: The country must announce a plan to reduce its debt and then follow it. In this regard, the mechanism institutionalizes the original conception of IMF lending and much current practice, except that IMF help becomes part and parcel of an overarching debt restructuring plan agreed to by the debtor country and its private foreign creditors.

WHY WAS THE SDRM SPURNED?

Why did the SDRM fail to take wing? In the debates that led up to its rejection, two sorts of objections were voiced. The first type questioned the wisdom of formalizing the restructuring process at all because of what that might mean for all countries' access to credit in the future. The second type was more procedural: The need for an efficient sovereign debt restructuring process was accepted in principle, but concern focused on the nature of the proposed mechanism.

The first type of objection held that if restructurings were made too easy, countries might be tempted to restructure too frequently.¹⁰ And, knowing this, lenders would lend very little to governments in the first place. In economic terms, this is the classic tradeoff between *ex post* benefits

and *ex ante* costs. *Ex post*, a country in default would be better off having access to a restructuring mechanism that can quickly and equitably reduce the burden of the debt. But *ex ante*, the increased likelihood of a debtor-friendly restructuring following default will make creditors wary about lending too much to them in the first place. Thus, credit will be granted at worse terms — higher interest rates — making repayment more costly, reducing a country's *debt capacity*. This concern resonated with investors and some emerging market governments. Brazil, for instance, argued that the existence of the SDRM might make foreign lenders reluctant to lend to emerging economies for fear they would abuse the mechanism by restructuring too frequently.

The question is: What would happen to governments' debt capacity if an SDRM were put into place?

The pivotal procedural objection questioned the necessity of an expensive, full-blown international mechanism for solving the holdout problem.¹¹ Instead, a contract-based approach, which was already common in the U.K., ultimately prevailed. In the U.K., a clause in corporate bond contracts permits the debtor to change the payment terms for all bonds in the same issue as long as a majority of holders of the bonds in that issue favors the change. The new terms become binding on all bondholders, including dissenters. This clause — called a majority action or collective action clause (CAC) — serves the same purpose as a Chapter 11 cramdown by taking away the incentive of individual creditors to act opportunistically. Since the use of CACs requires no change in international law — only that the clause be enforceable in the jurisdiction in which the bond is issued — it was viewed as a lower-cost alternative to a formal SDRM.

WOULD AN SDRM HAVE SLAIN THE SOVEREIGN DEBT MARKET?

It is certainly true that because creditors cannot grab the assets of a nation in default, a costly and messy restructuring process is the main deterrent to default and that a country will weigh the alternatives carefully before seeking a restructuring of its foreign debt. As noted earlier, a strong deterrent to default lowers the interest rate that countries

must pay on their debt, since lenders will charge a lower premium to compensate them for the possibility of default. This lower cost of borrowing increases governments' debt capacity. The question is: What would happen to their debt capacity if an SDRM were put into place? As mentioned earlier, some economists are of the view that by making restructurings all too easy, the SDRM would deal a death blow to the sovereign debt market: Investors would respond by greatly reducing the amount of money they lend to governments. Taking for granted that greatly reduced debt capacities will do great harm to nations that need to borrow, an SDRM, in this view, cannot be a good idea.

However, most economists and legal scholars who have scrutinized the SDRM proposal do not share this view. Generally, it is understood that the point of the SDRM is to reduce the costs of restructuring by taming the holdout problem, not to reduce the costs of default. The thought is that by providing a forum for renegotiations, the SDRM would encourage overly indebted countries to negotiate with lenders *ahead of* default. Thus, at the time of renegotiation, the country would know that if it failed to come up with an acceptable offer, it would have to suffer the costs of default. Similarly, creditors would know that if they spurned all reasonable offers, they would end up with nothing, at least for a while. Thus, both parties have an incentive to agree to a reasonable restructuring plan.¹²

In this view, the presence of an SDRM should strengthen, not debilitate, the sovereign debt market. For instance, it could open the door to other innovations: If creditors publicly registered all claims against the distressed country, the country may find it easier to implement a restructuring process that gives priority to older claims over newer claims. Such a system, which is common in corporate bonds but as-yet unknown for sovereign bonds, can also protect creditors and, hence, reduce the costs of foreign borrowing.¹³

CACS: AN EFFECTIVE SUBSTITUTE?

After the SDRM proposal was shelved, the U.S. Treasury made a concerted effort to get emerging market governments to insert CACs into new sovereign bonds issued in New York, where a large fraction of the world's sovereign bonds are issued. Mexico led the way in 2003, quickly followed by other Latin American countries. Now, nearly all sovereign bonds issued in New York carry CACs. In Europe, the Greek restructuring motivated the European Commission to make CACs mandatory in all sovereign bonds issued by euro member countries since 2013. Does this prolifera-

tion of CACs obviate the need for an SDRM?

There is some indication that CACs are indeed effective in reducing the perceived likelihood of prolonged restructurings. For countries with less-than-stellar credit ratings, CAC-enhanced bonds have generally sold for higher prices than bonds without CACs, suggesting that investors perceive CACs as a force in favor of a speedier restructuring, were one to become necessary.¹⁴

Still, there are reasons to think that CAC-enhanced sovereign bonds are not a substitute for an SDRM. First, CAC-enhanced bonds are relatively new, and a large stock of sovereign bonds outstanding do not bear this clause. Until this stock of pre-CAC bonds matures or is bought back, the safeguards that the new CAC-enhanced bonds offer will be less potent.¹⁵ A high-profile court ruling in the U.S. has significantly enhanced the bargaining strength of holdout creditors by giving them the power to interfere with debt repayment to creditors who agree to a restructuring. This remarkable development occurred with regard to litigation between holdout investors and Argentina following a restructuring of its sovereign debt in 2005 (Argentina's bonds had no CACs). This precedent makes it more profitable for investors specializing in distressed sovereign bond funds to pursue governments for full repayment. Many commentators have pointed out that this development will make it harder for countries to reach restructuring agreements on bonds without CACs that involve a substantial reduction in indebtedness.¹⁶

Second, CAC-enhanced sovereign bonds have found willing buyers only if the threshold for collective action is relatively high. Generally, creditors holding 75 percent, and in some cases more, of a particular issue would have to agree to any binding change in payment terms. The 75 percent threshold would seem to be the same as the one proposed in the SDRM, but that is not the case. The SDRM threshold had applied to total registered debt, while the CAC threshold applies to each issuance of bonds. For many countries, the amount of debt outstanding is small compared with the overall size of international capital markets, and their bonds sell at a steep discount when they are having difficulty meeting payments. It is then relatively easy for so-called vulture funds to buy up more than 25 percent of an issue and hold out for full payment. For instance, about half of Greece's sovereign bonds issued under U.K. law escaped restructuring because it was relatively easy for holdouts to purchase blocking shares in these issues, and payments on these bonds are being made as originally contracted.¹⁷

Third, if investors indeed prefer CAC-enhanced bonds,

one has to wonder why the clause did not become popular earlier. Legal scholars have pointed out that New York bond attorneys were well aware of CACs but used them sparingly in sovereign bond contracts.¹⁸ This suggests that CACs became popular largely because the U.S. Treasury leaned on governments to use them and that countries complied in form — but not in spirit — by choosing a relatively high threshold for collective action. But why, then, did CAC-enhanced bonds sell at higher prices than non-CAC-enhanced bonds? The explanation may be mismeasurement. Because the switch from regular to CAC-enhanced bonds was so quick, researchers are limited to comparing the price of regular bonds issued prior to 2003 with the price of CAC-enhanced bonds issued after 2003.¹⁹ This unfortunate fact leaves open the possibility that the premiums on CAC-enhanced bonds rose because some other factors changed right around 2003. One possibility is that investors became more willing to invest in risky assets such as emerging market sovereign bonds as interest rates on safe assets such as U.S. Treasuries fell to historic lows in the post-2002 period.²⁰

So, while CACs provide some safeguard against holdouts — a 75 percent threshold is better than a 100 percent threshold — it might be premature to conclude that the proliferation of CACs in sovereign bonds issued under New York law has paved the way for smooth restructurings.

CONCLUSIONS

It is difficult to look at the postwar era of international borrowing and lending and not come away thinking that we are witness to a bad case of misaligned incentives. Creditors, reasonably confident that bailout packages will allow them to recover most of their money, lend at rates that do not reflect the true risk of default. Governments, faced with willing lenders and fearful of the costs of default, keep on borrowing until the day of reckoning is upon them. The IMF, unable to countenance a messy default by a country important to the global economy, be it emerging or advanced, comes through with the anticipated bailout, and foreign investors get their loans paid off.

This situation could be remedied by the sovereign debt restructuring mechanism proposed by the IMF back in 2003. The SDRM provides a legal mechanism for dealing with repayment problems that accompany the flow of private capital to governments. The existence of an SDRM would facilitate timely restructurings when foreign obligations become excessive (because the impediments to restructurings

would be reduced), reduce the likelihood of excessive foreign borrowing (because creditors would be more circumspect of the possibility of restructurings and attendant losses), and eliminate bailouts (because the IMF would feel less impelled to intervene if there is a palatable alternative to outright default). Although the spread of CACs has been a positive development, their effectiveness remains uncertain because of the high thresholds required for collective action and because of the large stock of foreign debt outstanding that does not carry CACs.

In the meantime, the risk of sovereign debt crises is growing, especially in the developed world, where demographics and politics are conspiring to rapidly increase countries' indebtedness. Since advanced economies have a large footprint in world capital markets, many commentators have expressed alarm over the situation. These developments — Greece's debt crisis included — led the IMF to take a second look at the desirability of an SDRM and have led some economists to strongly endorse the idea of a formal restructuring mechanism.²¹ ■

NOTES

¹ For the purposes of this article, *sovereign default* describes a situation in which a country quits trying to repay its creditors or must obtain an international bailout. Depending on how broadly default is defined, several more countries have defaulted during this time. For instance, Carmen Reinhart defines sovereign default as the failure to meet a principal or interest payment on the due date (or within the specified grace period) or episodes where rescheduled debt is ultimately extinguished in terms less favorable than the original obligation and offers a longer list of countries that defaulted from 1990 to 2015.

² Many developing countries rely on commodity exports to earn foreign currency, but commodity prices are notoriously volatile, causing large fluctuations in the value of their domestic currency. In addition, emerging economies often attempt to peg the value of their currencies to major foreign currencies such as the U.S. dollar. Such pegging succeeds if the country has large reserves of foreign currencies. But if reserves shrink as the country's ability to earn foreign currency is impaired, the peg becomes unsustainable and the currency devalues massively.

³ In Ireland, for example, the national debt exploded because the government nationalized private sector debt in an effort to contain the fallout from the financial crisis. In the U.S., the government-sponsored enterprises Fannie Mae and Freddie Mac became wards of the state, so their debts have now become the obligation of the U.S. government.

⁴ For instance, a mutual fund company that creates a fund focused on emerging markets would naturally include a whole raft of countries in the fund in order to diversify risk. But if default by one country in the fund causes investors to reduce their exposure to the fund itself, the fund will have to reduce its holdings of the sovereign bonds of *all* countries in the fund, including those not directly affected by the default. Thus, the threat of default in Mexico caused stock markets in Argentina and Brazil to drop in 1995 even though direct trade links among these countries are quite minimal. See Roberto Rigobon's monograph for an in-depth discussion of contagion.

⁵ The book by Barry Eichengreen provides a concise history of the international financial system.

⁶ For a brief history of the Latin American and emerging market debt crises, see <http://www.federalreservehistory.org/Events/DetailView/46>.

⁷ These collateralized bonds became known as Brady bonds and the restructuring plan the Brady plan, after then U.S. Treasury Secretary Nicholas Brady, who had advanced it.

⁸ In the aftermath of the Asian crisis, the policy was expanded to allow lending into arrears resulting from defaults on nonbank debt (bonds). See the IMF's 1999 publication for a discussion of the evolution of its lending in arrears policy.

⁹ For details of the proposal, see Anne Krueger's 2002 IMF article and the actual proposal submitted to the governing body of the IMF in February 2003.

¹⁰ See Andrei Shleifer's short article, provocatively titled "Will the Sovereign Debt Market Survive?"

¹¹ This objection was voiced by John Taylor, then undersecretary for international affairs at the U.S. Treasury Department.

¹² Of course, the mechanism could be abused. For instance, a rogue nation could activate it over and over again, making a mockery of the restructuring process. But such behavior could be discouraged by requiring countries to wait a certain number of years between activations. A similar limitation exists in the U.S., where one can file for personal bankruptcy no more often than every seven years.

¹³ Giving older claims priority in a restructuring means imposing fewer losses on older claims relative to newer claims. Burcu Eyigungor's *Business Review* article explains why giving priority to older claims benefits countries, and Patrick Bolton and David Skeel's article explains how the SDRM can make it possible to implement such a priority rule.

¹⁴ The premium does not apply to countries with stellar credit ratings because their likelihood of a restructuring is low. See Michael Bradley and Mitu Gulati's 2014 article for a thorough discussion of the perceived investor valuation of CACs. Also, it is worth pointing out that the evidence on the price effects of CACs is somewhat mixed. An earlier study by Torbjörn Becker, Anthony Richards, and Yunyong Thaicharoen had found no evidence that investors viewed CACs either positively or negatively.

¹⁵ For most emerging market economies, the secondary market for their sovereign debt is relatively illiquid. This means that the country must offer an attractive price to its current bondholders (pension funds, for instance) to entice them back into the market and swap their existing debt for CAC-enhanced debt. Since such swapping does not seem to be occurring on a large scale, we may infer that the cost of enticing investors to trade old debt for new debt is too high — even though the pension funds would have paid more for CAC-enhanced bonds had they been offered initially.

NOTES (CONTINUED)

¹⁶ See, for instance, the *Financial Times* article and the brief filed by Anne Krueger in favor of Argentina's appeal to deny holdout creditors the power to obstruct payments to creditors who had agreed to the restructuring in 2005.

¹⁷ This experience has led the euro zone to mandate "super-CAC" clauses in all sovereign debt issued by euro member countries since 2013. A super-CAC clause makes it possible for creditors as a group to override holdouts on any given issue, provided there is enough support (over all issues combined) for the restructuring. Still, even such super-CAC bonds are not entirely bulletproof against determined holdouts.

¹⁸ See the 2013 article by Mark Weidemaier and Mitu Gulati for a discussion of the use of CACs in sovereign bonds issued under New York law before 2003.

¹⁹ Bradley and Gulati examine the diffusion of CAC-enhanced bonds among new issuances of sovereign bonds under New York law; see their figures 1 and 2 (p. 2,050).

²⁰ The inflation-adjusted yield on long-term U.S. Treasury bonds has moved up and down over the last 200 years. Nevertheless, as documented in Eichengreen's paper, post-2002 yields are low in comparison with yields during the previous half-century (see his figure 1). Also, we know from numerous accounts that the six years preceding the 2007–2008 crisis was an era of high finance in which vast sums of money flowed into all sorts of risky investments. Also, while the crisis caused investors to retreat from mortgage-backed securities and related financial products, they thronged to emerging markets in search of higher yields.

²¹ The IMF's second look is discussed in the 2013 article on sovereign debt restructuring. For the views of a distinguished group of economists and legal scholars regarding the desirability of a sovereign debt restructuring mechanism, see the 2013 report of the Committee on International Economic Policy and Reform. There is also growing international recognition that the world needs a multilateral sovereign debt restructuring process to replace the current flawed system. The United Nations General Assembly in 2015 adopted a resolution on the principles that should guide sovereign debt restructuring processes.

REFERENCES

Becker, Torbjörn, Anthony Richards, and Yunyong Thaicharoen. "Bond Restructuring and Moral Hazard: Are Collective Action Clauses Costly?" *Journal of International Economics*, 61 (2003), pp. 127–161.

Blustein, Paul. *The Chastening: Inside the Crisis That Rocked the Global Financial System and Humbled the IMF*. New York: Public Affairs, 2003.

Bolton, Patrick, and David Skeel. "Inside the Black Box: How Should a Sovereign Bankruptcy Framework Be Structured?" *Emory Law Journal*, 53 (2004), pp. 763–822.

Boughton, James M. *Silent Revolution. The International Monetary Fund 1979–1989*, Washington, DC: IMF, 2001.

Bradley, Michael, and Mitu Gulati. "Collective Action Clauses for the Eurozone," *Review of Finance*, 18 (2014), pp. 2,045–2,102.

Committee on International Economic Policy and Reform. "Revisiting Sovereign Bankruptcy," October 2013.

Eichengreen, Barry. "Secular Stagnation: The Long View," National Bureau of Economic Research Working Paper 20836 (2015).

Eichengreen, Barry. *Globalizing Capital: A History of the International Monetary System*. Princeton, NJ: Princeton University Press, 1996.

Eyigungor, Burcu. "Debt Dilution: When It Is a Major Problem and How to Deal with It," Federal Reserve Bank of Philadelphia *Business Review* (Fourth Quarter 2013).

Financial Times. "Vulture Hedge Funds Set to Target Unprotected Government Debt," November 12, 2014.

International Monetary Fund. "Sovereign Debt Restructuring — Recent Developments and Implications for the Fund's Legal and Policy Framework," April 26, 2013.

International Monetary Fund. "Proposed Features of a Sovereign Debt Restructuring Mechanism," February 12, 2003.

International Monetary Fund. "IMF Policy on Lending into Arrears to Private Creditors," June 14, 1999.

Krueger, Anne O. *Amicus Curiae in Support of the Republic of Argentina and Reversal*, United States Court of Appeals for the Second Circuit, January 4, 2013.

Krueger, Anne O. "A New Approach to Sovereign Debt Restructuring," International Monetary Fund, April 16, 2002.

Reinhart, Carmen M., and Kenneth S. Rogoff. *This Time Is Different: Eight Centuries of Financial Folly*. Princeton: Princeton University Press, 2009.

Rigobon, Roberto. *International Financial Contagion: Theory and Evidence in Evolution*, The Research Foundation of the Association of Investment Management and Research, August 2002.

Shleifer, Andrei. "Will the Sovereign Debt Market Survive?" *American Economic Review*, 93:2 (2003), pp. 85–90.

Taylor, John. "Sovereign Debt Restructuring: A U.S. Perspective," paper presented at a conference on *Sovereign Debt Workouts: Hopes and Hazards*, Institute for International Economics, Washington, DC, April 2, 2002.

United Nations General Assembly, Draft Resolution A/69/L84. "Basic Principles on Sovereign Debt Restructuring Processes," September 10, 2015, <http://unctad.org/en/pages/newsdetails.aspx?OriginalVersionID=1047>.

Weidemaier, C. Mark, and Mitu Gulati. "A People's History of Collective Action Clauses," *Virginia Journal of International Law*, 54:1 (2013), pp. 51–95.