

21/07/2021

# **Prefer to Defer: Has the Time for 'Bendybonds' Finally Come?**

Benjamin Heller and Pijus Virketis<sup>12</sup>

To raise the subject of State-Contingent Debt Instruments is to join a procession of scholarship that runs back at least to a 1988 type-written paper by Paul Krugman, which opened by noting a swell of “discussion of new approaches to the developing country debt problem” brought on by the sovereign debt crises of that era.<sup>3</sup> In the 30 years since, the crises have kept coming, and so have the increasingly refined economic analyses of the clear welfare-improving advantages of SCDIs over traditional loans and bonds, and the increasingly wistful multilateral organization conference memos and policy papers urging their adoption.<sup>4</sup> On the legal front, ICMA has advanced as far as drafting indicative terms for the two types of SCDIs to be seen in the wild at all: hurricane-contingent bonds, issued by Grenada and Barbados, and GDP-linked bonds, issued by Bosnia and Italy.<sup>5</sup> Yet for all that, Argentina and Ecuador have just concluded consensual restructurings of almost USD 100 billion in external debt without any state-contingent elements incorporated into the exit instruments, despite numerous concrete ideas put forth by

---

<sup>1</sup> We are very grateful for comments from Dennis Hranitzky and Thomas Moatti.

<sup>2</sup> [pvirketis@hbk.com](mailto:pvirketis@hbk.com)

<sup>3</sup> P Krugman, ‘Financing vs. Forgiving A Debt Overhang’ (1988) NBER Working Papers #2486

<sup>4</sup> IMF, ‘State-Contingent Debt Instruments For Sovereigns’ (2017) IMF Policy Papers

<sup>5</sup> ICMA, ‘Indicative Terms and Conditions for Sovereign Hurricane Bonds and Loans’ and ‘GDP-Linked Bonds: A New Design for Sovereign Debt Markets’ (2020)

creditors in public and in private.<sup>6</sup> So far, SCDIs remain the obvious idea whose time just won't come. The mismatch between the theory and reality for sovereign debt is even stranger given that state-contingent features are already widely deployed in one sphere: high-yield corporate debt. In this short note, we set out the motivation for and the type of state contingency, borrowed from corporate practice, that resonates with us as developing sovereign debt investors. We highlight how naturally these ideas mesh with the goals the G20 and international financial institutions are promulgating in the face of clear deficiencies of the first round of the 2020 DSSI.

## MOTIVATION

As noted, it is well established that both the borrower and the lender would be ultimately better off if, during a passing negative shock, the debt claim would be reshaped in some orderly way to match then-available resources. The borrower's spending is not throttled just when it is most needed to sustain activity, and a short-term liquidity crisis is less likely to spiral into a terminal solvency one. That is in the lender's long-term interest as well. This insight has been put to most concrete practice in corporate credit, in two areas: ex ante, the issuance of "hybrid" instruments by corporations and banks, and, ex post, the introduction of available-cashflow-matching terms into the restructured debt of distressed businesses. We believe some of these mechanisms can be adapted to the sovereign context and become standard terms in bond contracts. Before describing the salient details, let us briefly turn to why the sovereign debt market is especially ripe for this sort of innovation today.

Any unanticipated restructuring will carry not only direct costs but also some amount of deadweight loss. This goes especially for sovereign debtor defaults, which have implications that radiate across whole economies and populations, often coincide with financial system and currency crises in ways that academic researchers are still working to untangle, and lead to political convulsions.<sup>7</sup> Sub-national, state-

---

<sup>6</sup> Argentina Exchange Bondholders Group, 'Joint Debt Restructuring Proposal of Ad Hoc Bondholder Group and Exchange Bondholder Group' (2020/05/27)

<sup>7</sup> Martin Uribe and Stephanie Schmitt-Grohe, *Open Economy Macroeconomics* (2017) Princeton University Press, Chapter 13

supported and corporate borrowers often also end up defaulting and find themselves excluded from capital markets for considerable periods. On the opposite side of the ledger, investors are faced with a run-up of increasingly chaotic trading, ratings agency downgrades, then the daunting time, legal and reputational costs of engaging with the defaulter in debt renegotiations, and, even after agreement terms are struck, often a period of subsequent market volatility

It is customary to say that the defaults of nations are so unpleasant, because, unlike for corporations, there is no formal bankruptcy regime for them, no court to stay all the competing claims, adjudicate once and for all what the fair recovery is, distribute losses across creditors, and facilitate raising of working capital through secured borrowing. Unsurprisingly, there have been numerous attempts to address this lacuna head-on. The IMF championed a Sovereign Debt Restructuring Mechanism in 2002<sup>8</sup>, and the idea has remained evergreen.<sup>910</sup>

After 20 years, we believe it is safe to say that a sovereign bankruptcy court does not and will not exist any time soon for intractable structural reasons. For bondholders, it is not a question of resistance to the reality that adjustments of claims are sometimes necessary, nor even the idea that outside adjudicators might have a role to play in establishing payment capacity. Rather, it is the inherent asymmetry of enforceability of the judgments of the “court”, whose writ could instantly invalidate the legal existence of a claim but never likewise run to compel a sovereign to hand over resources. In fact, the market’s acceptance of contractual reform in the wake of early 2000s wrangling over “SDRM” shows that bondholders are open to making the adjustments of claims work better. Our present proposal looks for inspiration to Collective Action Clauses, a reasonably successful contractual innovation introduced into bond indentures under the aegis of ICMA.<sup>11</sup> The CACs set out to work with the sovereign bond market as it is today, not work around it or against it. They have been successfully invoked this year in Argentina

---

<sup>8</sup> Anne Krueger, ‘A New Approach to Sovereign Debt Restructuring’ (2002) IMF

<sup>9</sup> Lee C. Buchheit et al., ‘Revisiting Sovereign Bankruptcy’ (2013) Brookings

<sup>10</sup> Patrick Bolton et al., ‘Born Out of Necessity: a Debt Standstill for COVID-19’ (2020) CEPR Policy Insights 103

<sup>11</sup> ICMA, ‘Standard Collective Action and Pari Passu Clauses for the Terms and Conditions of Sovereign Notes’ (2014)

and Ecuador restructurings to achieve near-100% binding effect. SCDI features should also become a normal part of the contractual-terms best practice.

Connoisseurs may wonder how our ideas relate to the “GDP Warrant” line of instruments, issued by Argentina in 2005/2010, Greece in 2012 and Ukraine in 2015; their point is to give some of the value just shorn from bondholders during a restructuring back to them, if, thanks to their sacrifice, the relieved economy proceeds to recover strongly. If judged by notional amount outstanding, GDP Warrants have certainly been the most important real-world SCDI-adjacent innovation, and the idea of “tradeable GDP” has garnered academic attention.<sup>12</sup> We appreciate the merits and strong inherent logic of GDP Warrants, but think they would be the wrong departure point for this discussion. Today, the bulk of the world’s claims on sovereigns consists of debt, of fixed cashflows: that is what the market is set up to trade, analyze and own. It is quite a different story to ask it to absorb quasi-equity Warrant instruments, and instead of trying to make that leap, we seek to find the least-ambitious modifications to standard, familiar bond terms that still appreciably improve the joint welfare of borrowers and lenders.

Let us finally mention the financial engineering problem that served as the motivating case here. In March, the IMF published a “Technical Note” on Argentina’s debt restructuring that played an influential, controversial role in the negotiations towards and the shape of the final settlement.<sup>13</sup> In it, the Fund set out the technical criteria that a satisfactory restructuring should meet, calibrating these, among other things, to a “potential ... adverse, but plausible [rollover] shock”. Better safe than sorry: Argentina’s running financing needs should be cut down to a level so low that in any year where the global markets are volatile, the small local banking system would be able to meet them entirely by itself. Let us set aside the point that this is a bar the IMF has not, to our knowledge, ever asked any other sovereign under its tutelage to meet, and that very few could do it. The very framing here results in a demand for an

---

<sup>12</sup> Robert Shiller et al., *Sovereign GDP-Linked Bonds: Rationale and Design* (2018) CEPR Press

<sup>13</sup> IMF, ‘Argentina : Technical Assistance Report-Staff Technical Note on Public Debt Sustainability’ (2020) IMF Country Reports 20/83

extraordinary degree of “over-insurance”: every year’s actual cashflows are sized to the exigencies of a single, hypothetical bad year. For Argentina, this high pitch of safety was to be achieved on the back of creditor losses, but, even when considered generally, this is obviously inefficient. We believe that IMF’s goal can be much better met by using state-contingent terms.

## **DESIGN**

Banking sector “hybrid” securities represent the first analogue we would like to learn from.

Systemically-important banks share some qualities with sovereigns. They certainly can and do run into trouble, but their bankruptcy, if handled naively, leads to overwhelming external and deadweight costs – depositor panics, contagion, counterparty losses – and thus has been avoided by governments, if possible. However, the required bailouts also carry their own economic and socio-political downsides. The policy response has been multipronged and mostly not directly applicable to sovereigns, but the hybrid debt and “contingent convertible” (CoCo)<sup>14</sup> strand is relevant, as these instruments:

1. provide cashflow flexibility: coupons can be deferred or cancelled altogether; the principal amount is either finally due only at some far-off date or never (“perpetual”), and a series of call dates (i.e. times at which the borrower has the right but not the obligation to repay) serve as potential principal extinguishment points.
2. contractually specify when said flexibility can be used and what it costs: rather than having to wait for the doomsday of default and restructuring, the issuer points to its financial performance or a regulator’s order to trigger the provisions. The compensation to the creditors is pre-determined in terms of coupon rate step-ups, which incentivize the issuer to then pay off the obligation when it can.

---

<sup>14</sup> Mark J. Flannery, ‘Contingent Capital Instruments for Large Financial Institutions: A Review of the Literature’ (2014) Annual Review of Financial Economics

A number of the largest European banks have availed themselves of these tools, especially during the Covid pandemic. Even prior to it, in 2019, Spain's Banco Santander chose to skip a call date on a EUR 1.5bn perpetual instrument. Since then, Lloyds Banking Group, Deutsche Bank and Aareal Bank AG have all declined to call CoCo hybrids on the first call date, while Italy's UniCredit skipped a coupon on its EUR 3 bil CASHES hybrid in May 2021. Investment-grade non-financial corporations have also taken to issuing hybrids in the current low-interest-rate environment. Cumulatively, there are hundreds of billions of dollars' worth of hybrids outstanding<sup>15</sup>, and their flexibility does get used. In 2019, Südzucker, a German agricultural firm, suspended the coupon on a EUR 700 mil hybrid when a contractual cashflow trigger was hit due to poor operating results. The airline Lufthansa suspended the coupon on EUR 500 mil of junior notes until it can repay pandemic state aid. To belabor the obvious, all of these bellwether corporations have remained going concerns and, at the timing of writing, have multi-billion dollar equity valuations and access to the debt markets.

The second analogue comes from non-financial corporate restructuring practice. The stakeholders who shape the final agreement have to lay out the revised debt terms that match the expected cashflows, but no one wants to end up back at the table because operations turn out to be a few quarters behind schedule or there is a passing macroeconomic swoon in a few years. The resulting contracts may include both the features already discussed above, as well as "Payment-in-Kind (PIK)" and "PIK-toggle" provisions: instead of paying coupons in cash, the borrower may choose to capitalize them in part or in full into the principal amount of the claim. Unfortunately, while there is plenty of evidence of these terms being deployed during restructurings, because these instruments tend to be private and trade over-the-counter, it is harder to find public reports about PIKs actually being invoked.

The bottom line is that all these mechanisms are fairly simple, modify the foundational form of a "bullet-maturity fixed-coupon bond", and aim to give relief and allow time to determine whether a

---

<sup>15</sup> Scope Ratings, 'Europe's hybrid bond market cools down: Issuance volume should shrink to 2016/2017 levels' (2019)

challenging period spells liquidity or solvency trouble. Instruments incorporating them have been successfully issued, valued, traded and redeemed for many years.

We propose the following specific modifications.

### **principal**

When a country issues a "T-year bond", it is in fact a bond callable in T years, with final maturity in T+2 years.

### **coupons**

a. fixed through T, then a step-up rate, with all cashflows due at T+2, on final maturity.

*or*

b. deferrable intermediate coupons: for the first T-2 years of a bond's life, the sovereign may choose to pay up to 4 (semi-annual) coupons with new 2-year instruments carrying a step-up interest rate, with all cashflows payable at maturity or at accreted value at any time prior, at the issuer's discretion.

A concrete example may be useful. On 31/12/2020, Ruritania announces that it would like to issue a "10-year, 5% semi-annual coupon bond". Before, it would have matured on 31/12/2030, but now this – the day 10 years hence - will be the call date, when Ruritania can, very likely will, but does not strictly have to redeem it. If not called, the bond will be due another 2 years later, on its final, firm maturity date of 31/12/2032. For the first 10 years, the bond will cost Ruritania 5% per annum, paid in installments each July and December. But if not called, the coupon (assuming option a) above) will "step up" by some contractually stipulated increment: say it is 2%, and so the coupon is bumped up to 7% for the final 2 years. Importantly, Ruritania will not have to make any actual cash outlays in July and December of 2031 and July of 2032 – the breathing room it presumably needed – and will instead owe the principal and total accrued coupon amount on 31/12/2032. (For second illustration, see Appendix 1.)

Failing to call a bond at T, or to defer coupons will be seen as a "sign of stress" and – as corporate experience shows – will not be done lightly. The step-up rate will serve both as a deterrent to casual use, and an incentive to revert to normalcy if economically possible sooner. Negotiating the appropriate step-up quantum will be an important commercial matter for each issuer at the start, but, given that the plausible range is fairly narrow – 0.5% to 5% -, we believe that market-clearing levels would be established quickly.

Having only one call date, not too far from the final maturity, means that negative convexity and strongly variable interest rate sensitivity, normally flagged as problems of callable bonds, should not be first-order problems here.<sup>16</sup>

### **trigger conditions**

Control of the deferral mechanisms would be another way to balance the interests of the debtors and creditors, while potentially opening up a novel avenue for international debt policy coordination. We see the following sorts of trigger conditions:

1. “insurance policy”, triggered at sole discretion of the borrower.
2. ”pre-packaged liquidity program”, triggered at request of the borrower, approved by consent of a majority of affected creditors.
3. “official-sector sanctioned ‘standstill period’”: triggered at request of the borrower, either with a specific, individual endorsement from the IMF, or in the context of a global, multilateral debt standstill initiative period, like the current G-20 DSSI.

The widespread adoption of the 3<sup>rd</sup> option would fundamentally transform – albeit in a circumscribed way – the sovereign debt market. We are only aware of a single example where something like the “universal opinion of the world’s governments” was a determining factor in the timing and nature of a

---

<sup>16</sup> Pietro Veronesi, *Fixed Income Securities: Valuation, Risk, and Risk Management* (2010) John Wiley & Sons, Chapter 12



restructuring - Iraq in 2003-2006 – and it is and should remain *sui generis*.<sup>17</sup> Today, under very different circumstances, the G20 along with the leaders of the international financial institutions express a wish for a synchronized approach to post-COVID-shock debt relief.<sup>18</sup> Yet as the first round of DSSI showed, it is nearly impossible to include foreign-law bonded debt in these operations, when the underlying contracts only envisioned modifications upon near-insolvency, and these to be negotiated with creditors from scratch, under pain of litigation. There also appears to be growing appreciation that the limited terms of the DSSI did not go far enough to bridge real-world liquidity gaps.<sup>19</sup> The contractual innovations proposed above dovetail very naturally with these goals.

On the other hand, we must be clear that the exercise of the deferral option will not necessarily be “NPV-neutral” – to say nothing of “positive” - in the short term, if the market pricing did not anticipate the event, or even the long term, after all is said and done. To take the most adverse case, if a sovereign suddenly plunges into deep and irretrievable insolvency, then the deferrable contracts amount to a two-year standstill period: the most that can be said for them from the perspective of a bondholder is that this should hopefully facilitate a more orderly restructuring, where the special interests of some group of holdouts or the nearest-maturity bond, which always pleads for lenient treatment, will not warp the whole process. In other words, the adoption of these contractual terms are a real *ex ante* concession by the creditors. To insert them into the documents of high-yield, high-risk sovereigns, the debtors in turn will likely have to consent to constraints on new borrowing for the duration of cashflow deferral period, essentially also adopting the incurrence and maintenance leverage tests from high-yield corporate practice, but not heretofore used for sovereigns. This would head off the risk that an unscrupulous government might choose to defer cashflows prior to an election and then raise new financing for fiscal

---

<sup>17</sup> Simon Hinrichsen, ‘Tracing Iraqi Sovereign Debt Through Defaults and Restructuring’ (2019) LSE Economic History Working Papers 304

<sup>18</sup> G20, ‘Communiqué - G20 Finance Ministers & Central Bank Governors Meeting – 14 October 2020’ (2020)

<sup>19</sup> Development Committee, ‘Joint IMF-WBG Staff Note: Implementation and Extension of the Debt Service Suspension Initiative’ (2020)

largess in the resulting window. It would only make sense to use a deferral that also imposes incurrence limits in situations where normal market access is unavailable.

In any case, we believe that all sovereigns should have to adopt the already-drafted but so far often omitted ICMA “creditor engagement” language. If the “payout” of the “insurance policy” is intended to buy time, the time needs to be used properly, and understanding the possibility that a crisis may implicate solvency as well as liquidity, the debtor should be using this time to make ready for the type of engagement that is necessary to constructively cope with insolvency.

## **CHALLENGES**

Some of the general problems of SCDIs have been recognized for some time and are worth discussing with this specific proposal in mind.

First is the matter of analytical complexity. Perhaps SCDIs are still not seen in the wild, because whatever macroeconomic welfare gains they yield during rare times of stress are outweighed by constant practical challenges to most holders? This is a charge very fairly made against the “GDP warrant” line of SCDIs, and it is certainly true that valuing a bond with a call option and deferrable coupons is not as straightforward as bullet-maturity fixed-coupon instruments. Yet because our ideas are borrowed from a large existing corporate debt class, we know that these sorts of instruments have long been issued, valued and traded in the real world, are well analyzed in finance theory, and are supported by the financial industry’s software tools.

Second is the traditional challenge of “first mover”. Which finance minister will be the first to introduce this language into their bond documents and risk conveying the impression that they expect a liquidity crisis? There are some very encouraging points to be noted here:

- the adoption of ICMA’s aforementioned 2014 CAC – especially single-limb aggregation - language by almost all sovereigns by 2016 shows that the first-mover problem can be overcome

for useful, important changes that are developed with input from investors and supported by the official sector.

- a sovereign restructuring, when debt stacks are being reworked anyway, is an opportunity to make bolder changes. The multi-lateral agencies like the IMF should play a key role, both because they provide technical advice, and because they could incentivize the introduction of the terms discussed here in any number of ways: offer to lend a larger multiple of a country's quota, a discount on the facility's cost, etc. IMF's Flexible Credit Line (FCL) is an interesting analogue: the stronger economies that have access have been leery of using it, probably in part due to concern about signaling weakness, but when Colombia finally availed itself of it recently, the Fund topped up their allocation as an inducement.
- finally, the free market itself should work here: the borrower should be willing to pay a higher coupon on a flexible bond, if they know that in the bad state of the world, they will be able to use its features to conserve liquidity. Likewise, *ceteris paribus*, investors should assign a lower probability of outright default (and thereby lower credit spreads) to a debtor that has funded itself with flexible bonds.

Third is the related matter of the stigma of *use*, rather than mere formal inclusion, of the “bendy” provisions. Might a country refrain from taking advantage of contractually agreed payment deferral options for fear that the bond market or other economic agents would interpret the move as a signal of weakness and distress? Could the impact of the signal outweigh the benefits of the coupon deferral? Again, existing instruments of extraordinary support for sovereign issuers provide encouraging evidence that the magnitude of “use stigma effects” is modest.

- Similar criticisms have been levied against IMF programs. Nonetheless, countries have continued to avail themselves of IMF resources in times of stress. In our experience as market practitioners, we have found that more often than not, an issuer's credit spreads and currency rally on news of a program. Formal studies come to the same conclusion, namely

that evidence of a “stigma effect” is limited<sup>20</sup>. Inasmuch as the activation of payment flexibility follows similar logic of an admission of problems in exchange for easing of cashflow constraints, it seems reasonable to conclude the effects will not be substantially dissimilar.

- The aforementioned example of the multilateral Debt Service Suspension Initiative (DSSI) demonstrates a willingness on the part of a large sample of sovereigns to take advantage of cashflow relief in a way that admits vulnerability. While 46 borrower states have asked for DSSI relief, only one – Zambia, already in crisis prior to the pandemic – has included its eurobonds. All the rest – notably Ethiopia, which has made a special point of paying a bond coupon recently – have been happy to take relief from multilateral, bilateral and private commercial creditors, but not public market ones. This pattern of behavior suggests that concerns about stigma pale in comparison to the challenge of working through inflexible contracts in an ad hoc way. This very strongly revealed preference points to an inefficiency our proposal would help address.
- Finally, it is our expectation that the primary driver of activation of flexible payment features will be narrowing or loss of market access. In most cases, the market move will lead, rather than follow, the decision to use “bendy” features.

Fourth we turn to a few more abstruse issues that are nevertheless quite important to real-world investors.

- it is crucial that these deferrable instruments are included in all the usual bond indices and treated fairly by the ratings agencies. Helpfully, another, arguably more complex class of bonds - those partially-guaranteed (“credit-enhanced”) by multilateral agencies - have just been included in JP Morgan’s EMBI family of indices.

---

<sup>20</sup> Kai Gehring and Valentin Lang, ‘Stigma or Cushion? IMF programs and sovereign creditworthiness’ (2020) *Journal of Development Economics*

- ISDA will need to give due consideration to how existing CDS contracts interact with these new instruments. If a country defers a coupon, is that an Event of Default for the purposes of triggering CDS? We would strongly argue “no”, but we think the specific answer is less important than the presence of clear and unambiguous language in CDS documentation so that the treatment is clear and predictable, and there is no room for CDS considerations to drive irrational outcomes in the bonds.

## **CONCLUSION**

The sovereign bond market exhibits a high degree of inertia, both in terms of contractual forms and behaviors. That is perhaps to be expected in the presence of a set of borrowers, governments, subject to political pressures and accountability, and in the absence of any single governing law or juridical structure that can bind both creditors and debtors. But that does not mean that change is impossible. We have seen over the past two decades meaningful evolution, much of which has been punctuated by crisis. It is crises that demonstrate missing pieces and flaws in the structure of this market. In the wake of the Asian Financial Crisis of the late 90s, it became clear that sovereign debt structures weighted very heavily toward hard currency intensified volatility. In the subsequent years, the market witnessed an efflorescence of local currency, local law borrowing at increasing maturities, to a degree heretofore held to be impossible. In the wake of Argentina’s “hold-out crisis”, the market and issuers were able to come together to design and implement enhancements to Collective Action Clauses.

We are now in the midst of a crisis that demonstrates that there exist large exogenous shocks that can inflict sudden and extreme liquidity stress on sovereign borrowers. Countries and creditors are casting about for ways to deal with it, from soliciting for standstills via CACs, to the mooted Common Framework / DSSI initiative. We believe that, as in the past, heavy-handed, command approaches to solving the market’s problems are neither necessary nor desirable. We should look for inspiration to CACs, not SDRM. This crisis can be a catalyst for a voluntary, contract-based approach to making the market more robust to liquidity shocks -- reducing deadweight loss of defaults and ad-hoc restructurings,

easing the call on official resources, and speeding up resolutions. We just have to get over what's essentially a "habit" - that sovereign hard currency debt should be fixed coupon, fixed maturity. What doesn't bend too often breaks, and when sovereign credits break, the consequences are dire for everyone involved. Flexible bonds will make for a more flexible and resilient market.

## APPENDIX 1: Illustration of deferrals in context of a 2008 crisis scenario

For illustrative purposes, let us consider the current debt service schedule of Sri Lanka, which is under some market stress, and show what would happen to it if its bond stack had features described in this paper, and 2021 would turn out to be a reprisal of the 2008 crisis, with EM yields doubling from 6.7% to 12.3%, a level where even solvent countries would be unwise to borrow.

Sri Lanka could push the “2021” maturity to 2023 (by not exercising the 2021 call option) and defer the coupons on all the other bonds to 2023 as well by rolling them into 2-year bond. The government would incur additional interest on that, but get to refinance themselves in 2023, when yields would have normalized some time ago.

