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A new bargaining perspective on sovereign debt restructuring

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Lacking some supra-national, overseeing authority, sovereigns in default typically renegotiate with their creditors. In these negotiations, the owed principal typically receives a 'haircut'. This column explores whether overburdened sovereign debtors can strategically leverage delay as they bargain with their creditors. Under asymmetric information, a delay in the form of offers that the debtor knows won't be accepted can work out in the debtor's favour. The findings suggest that strategic delay can be used to show where restructuring is necessary.

There is no supra-national bankruptcy court to which sovereigns with problems fulfilling debt contracts can appeal; but there is bargaining between creditors (who want full value for their bonds) and the debtor (who seeks forbearance). In practice, since about 2000, sovereigns in default have had to choose between two types of renegotiation: reprofiling or restructuring. The former are relatively fast – possibly pre-emptive – 'market-friendly' settlements that frequently have a zero 'haircut' of the principal. Restructurings have deeper reductions of present value and are typically arranged ex post. For foreign currency bonds, the average haircut for reprofiling is about 15% while for restructuring it is some 50% (Mariscal *et al* 2016).

Table 1. Key settlements in the new Millenium: Size of haircut and delay in settling

	Uruguay 2003	Pakistan 1999	Ukraine 2000	Ecuador 1999	Russia 1998	Argentina 2003
Haircut	26%	30%	40%	60%	69%	67%
Delay, in months	1	10	3	12	18	40

In addition, to judge from settlements shown in Table 1, it seems that the bigger the reduction in principal, the longer it takes for the bargain to be achieved. In recent work, we investigate the idea that delay may be acting as a costly signal of how dire the situation of the debtor is; so, by waiting, the debtor may achieve a greater write-down (Ghosal *et al*. 2016).

After a brief look at reprofiling-type debt settlements that are achieved without delay, we turn to the case where there are different 'types' of debtor, and signalling-by-delay can be beneficial.

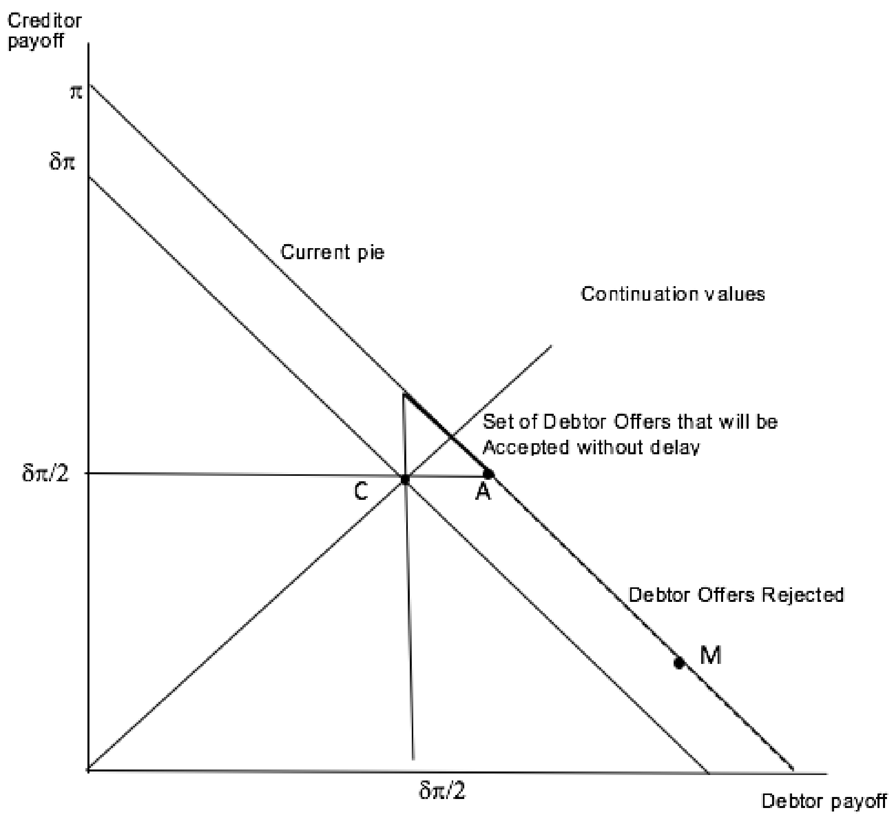
Prompt settlement

A caricature of prompt 'reprofiling' is to treat it as the outcome of a bargaining game between creditor and debtor that lasts for two periods – where the fiscal resources required to honour the debt in full define a 'pie' of consumption possibilities over which they are bargaining. In terms of the rules of the game, assume the sovereign debtor makes an offer in the first period; but that each party has an equal probability of being the proposer in the second period, when bargaining takes the form of an ultimatum game where the proposer takes all.

Figure 1 shows the situation, with debtor payoffs – current and expected – on the horizontal axis, and the creditor's on the vertical. Pareto-efficient settlements will lie on the downward-sloping 45 degree line labelled 'current pie', while discounted future prospects will lie on the upward-sloping 45 degree line, whose slope reflects the symmetry of bargaining power in the second period in this illustrative example. ('Breakdown' payoffs are zero for both players).

Given a common discount factor (delta), the 'continuation value' relevant for period one will be at the point labelled C. The solid line to the northeast of C (where both players match or improve on continuing into period two) indicates the set of *offers that will prove acceptable as prompt, final settlements*. One could think of these as reprofiling settlements. Offers lying on the dashed line will be rejected, however – they improve on continuation for the debtor, but not for the creditor.

Figure 1. Offers that dominate continuation at C; and one that does not



However, what will the creditor think of an offer like M which is nowhere near the region of acceptance? Recall what happened when news of the death of the celebrated arch-diplomat Prince von Metternich of Austria percolated around the other capitals of Europe. The question on everyone's lips was: what did he mean by that?

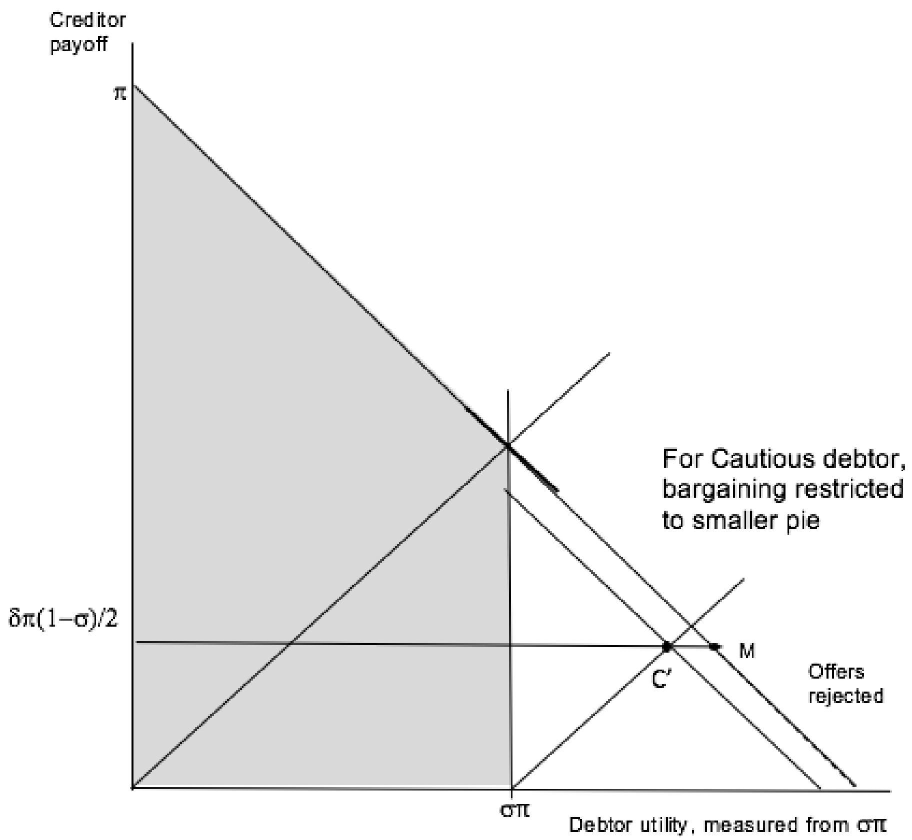
In the next section, we pose the same question of an offer like M.

What a 'mean offer' could mean

To motivate making an offer that's going to be refused, consider the notion that the debtor may be of a Cautious type. By this, we mean a debtor who believes that *not all of the pie is actually available for consumption by either party* – for reasons of sustainability, a fraction of the pie must perforce be dedicated to restructuring the economy – analogous, perhaps, to the time and effort required of a patient recovering from injury.

Offers that are 'off limits' for this reason will lie in the shaded area of Figure 2. *If this was common knowledge*, it would shift bargaining power immediately such that the line of continuation no longer starts at the origin, but at some point to the right of it.

Figure 2. A 'mean' offer from a Cautious debtor that will rejected so bargaining continues



But what if the Cautious debtor knows his type while the creditor does not? Consider, for example, the case of two possible debtor types, namely Cautious and Optimistic, where the latter (with sigma = 0) corresponds to the case discussed in the previous section. With asymmetric information, the Cautious debtor will need to signal his type in some credible fashion.

One way this could occur is where an Optimistic type of debtor makes a relatively 'generous' offer (such as the one labelled A in Figure 1) which will be accepted by the creditor immediately; but the Cautious type makes a relatively 'mean' offer to indicate his type, such as M for example.[1] With asymmetric information, this offer is refused, so the game continues; if delay works as a signal, however, the outcome is a shift in the continuation value to that of bargaining with a Cautious debtor, as shown by C' in Figure 2. Though this outcome involves delay and a loss of 'first- mover' advantage for the debtor, the restructuring-friendly settlement to be expected in period two – with present value of C' – dominates the prompt, reprofiling-type settlements considered earlier, as is clear from the figure.

With no bankruptcy court, bargaining replaces the scales of justice in determining write-downs; and, with asymmetric information, delay may help to show where restructuring is necessary. It is by 'waiting for a haircut', that Cautious gets his way.[2]

Issues to ponder

Taken at face value, the 'signalling' approach raises interesting policy questions. In the case of Argentina, for example, one might ask whether the signal was well-judged, as acceptance of the 2005 offer was limited to only about three quarters of the creditors. Perhaps, in seeking to 'pesify' dollar debts standing at 150% of GDP, Argentina overdid it in trying to signal more of a write-down as essential than was actually credible.

More generally, are there not more efficient ways of establishing sustainability needs? In the case of the Paris Club, achieving some of the Millennium Development Goals offers such a criterion (Sachs 2002, Aitor *et al* 2016). A current attempt to do something like this for Greece, whose external public debt currently stands at 180% of GDP, is provided by Zettelmeyer *et al* (2017), who use debt sustainability analysis for the purpose. By their calculations, Greece needs another write-down – without further delay.

References

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Endnotes

[1] For the signal to work, neither type should have an incentive to imitate the offer of the other type, which requires the delay in consumption to be high (but not too high). From a formal modelling viewpoint, this can be achieved by introducing an 'inside option from waiting' whose value is type dependent; or by allowing for mixed strategies, see Ghosal *et al* (2016) for details.

[2] The example given is, of course, highly stylised, though with some simple changes would fit better with the findings of Mariscal *et al* (2016). For example, one could shift second period bargaining power in favour of the creditor to limit the share for the debtor from prompt 'reprofiling' to only about 15% of the pie. Then choose so that the debtor gets 50% by waiting for second-period 'restructuring'. In addition, a higher discount factor for the debtor than the creditor would be more realistic.

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