Debt write-downs with heterogeneous creditors: 'lock laws' and 'late swaps'

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Health warning: What can happen when sovereign debt negotiations get out of hand

Manet:
Execution of Emperor Maximilian I of Mexico

On this occasion it was the sovereign debtor that took the law into its own hands

How to model ‘hold-outs’ in restructuring?

- The presence of ‘holdouts’ in sovereign debt swaps challenges application of bargaining models with homogeneous creditors, cf. Alternating Offers in Bulow & Rogoff (1989).
- In paper with Sayantan Ghosal, CEPR DP No 11000, we modify the Rubinstein framework to accommodate exogenous creditor heterogeneity - specifically holdouts who are **more patient than other bondholders.**

Patience can pay

Principal result; and major caveat

- Result for the two-type case involves an initial offer and associated 'lock-law' sufficient to tempt impatient creditors into a **prompt bond exchange;**
- Folowed by a delayed, **more generous swap with patient holdouts** timed to take place **when the lock-law expires**.
- Caveat: holdouts may be **endogenous**: may be *vultures* who buy distressed bonds with a view to litigating for the full face value plus their costs of waiting. Will discuss later.

Plan for presentation

- Briefly summarize argument for exogenous distribution of patient and impatient creditors
- Discuss risk of endogenous entry
- Look at specific case of vultures
- (a) strategies to check in future
- (b) chance for current compromise?

Set-up

- A **sovereign debtor**, D, is negotiating with two creditors, denoted by X for the **Exchange bond holder**, and by H for the more patient **Holdout**, distinguished by discount rates $\delta_X > \delta_H$
- Each creditor knows its own and other's discount rates; sovereign debtor is aware of the different discount rates, but not who is which.
- The **bargaining surplus** (the potential gains from restoring the debtor's access to capital markets) is **constant and normalised to one**.

Shares s_H and s_X

Bargaining game between debtor and Holdout at T has outcome

$$s_H = \frac{\delta_D}{\delta_D + \delta_H}(1 - s_X)$$

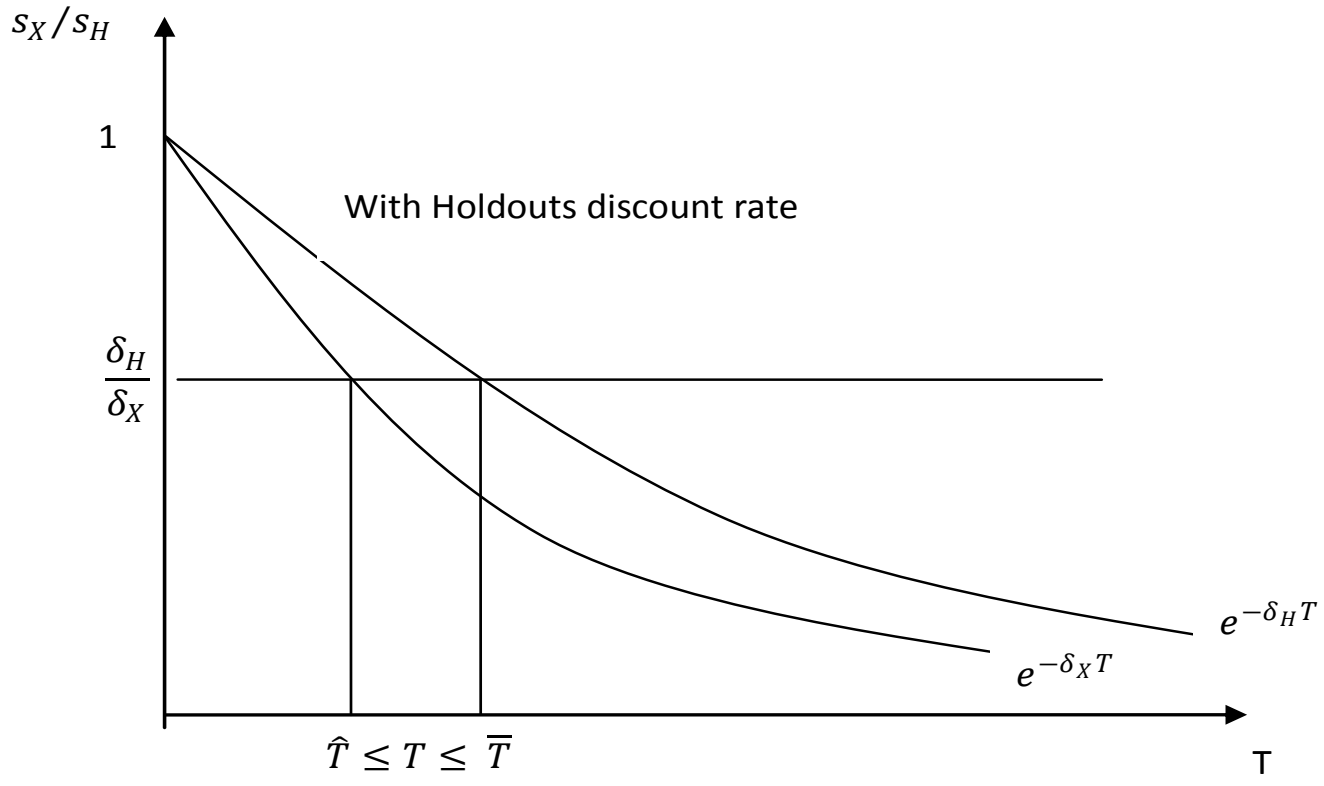
Bargaining game between the debtor and the Exchange bondholder at time zero T has outcome

$$s_X = \frac{\delta_D}{\delta_D + \delta_X}(1 - s_H).$$

Solve simultaneously for shares as function of discount rates, to find

$$\frac{s_H}{s_X} = \frac{\delta_X}{\delta_H}$$

Creditor shares and the waiting time



Figure

- Relative shares shown by horizontal line
- Incentive conditions define feasible duration of RUFO clause.
- Bottom endfar enough in future so **Exchange bondholder is not willing** to wait for more generous pay-out
- Top end: not be too far in future, so **Holdout is willing** to wait for more generous pay-out

Waiting Time

Exchange bondholder not willing to wait until for the higher share

$$s_H \; e^{-\delta_X \hat{T}} \quad \leq \; s_X$$

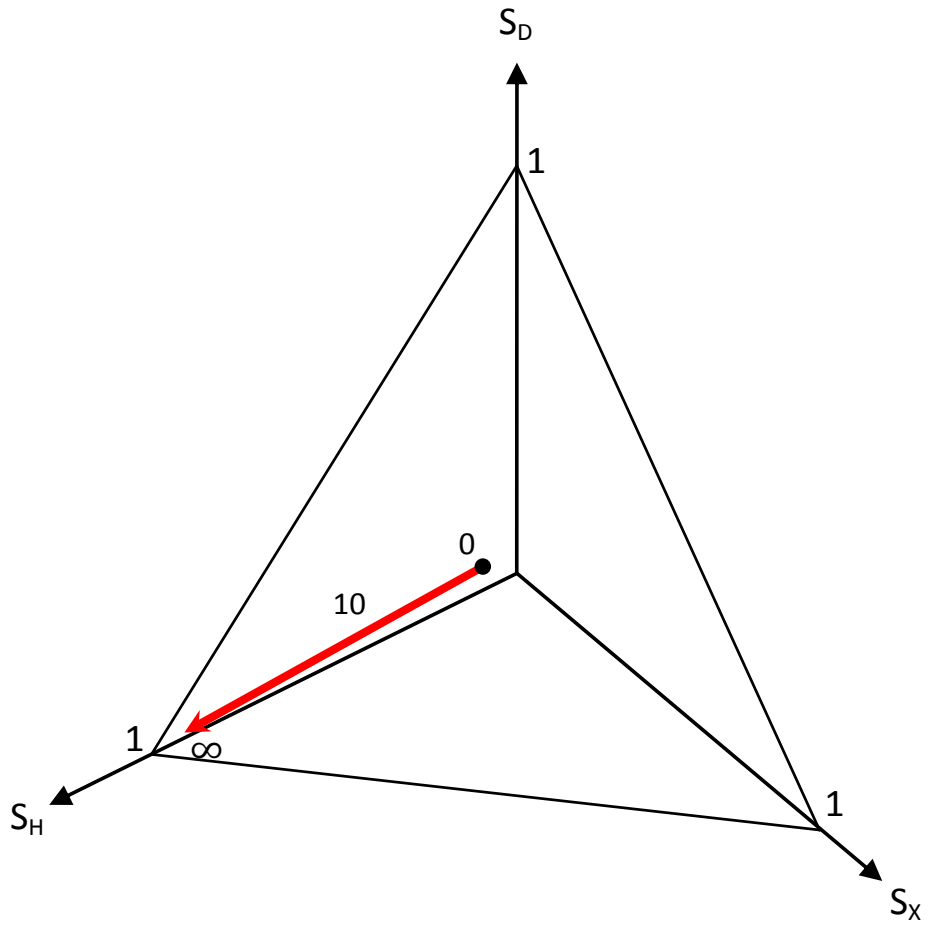
Holdout creditor has no incentive to deviate and join the Exchange bondholder to settle early

$$s_H \; e^{-\delta_H \hat{T}} \quad \geq \; s_X$$

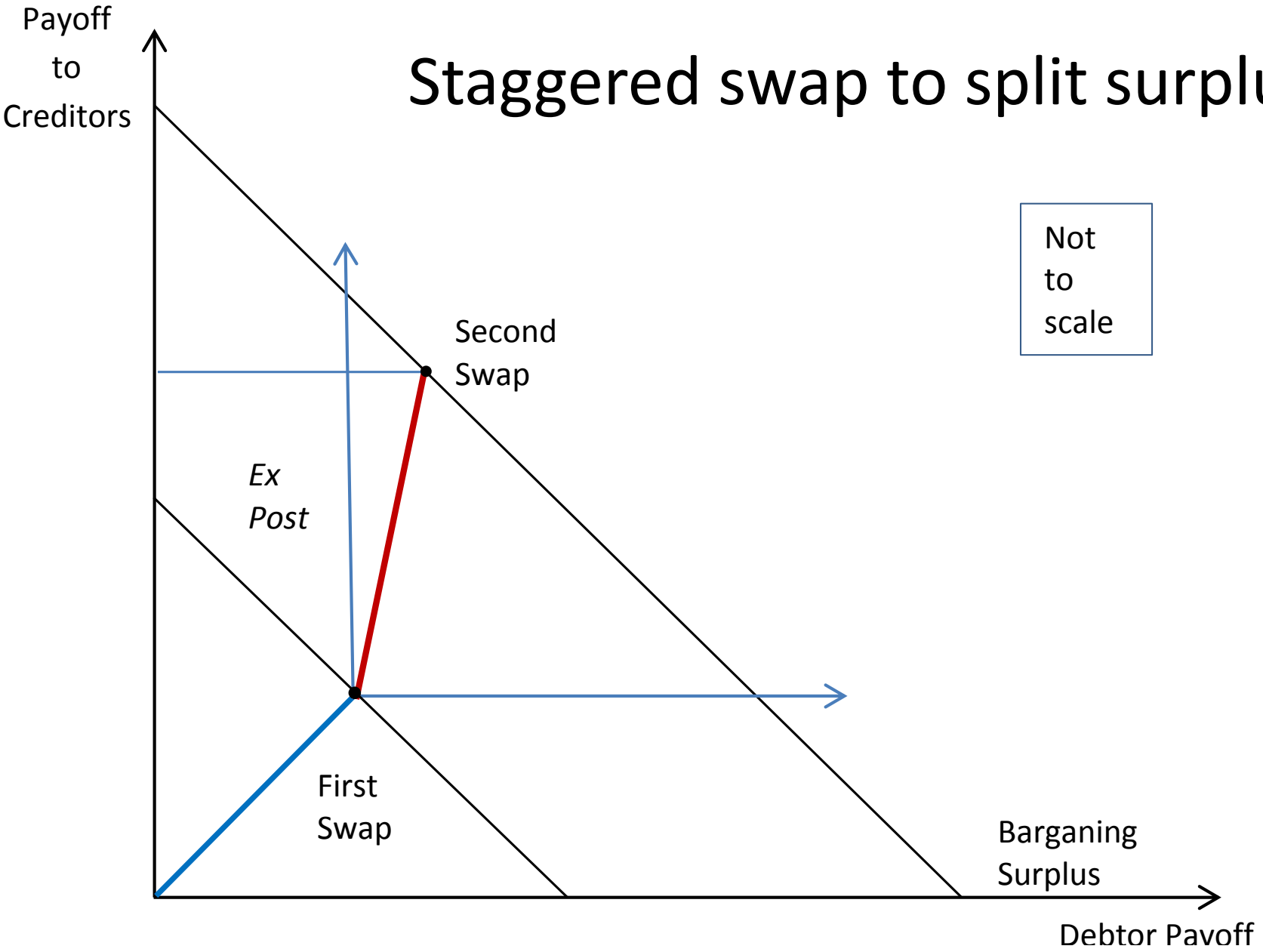
Benchmark waiting-time and creditor shares (for equal-sized creditors)

	$\hat{T}$	$\tilde{T}$	s_H	s_X	s_D
$\delta_H = 0.05$	0	0	0.33	0.33	0.33
$\delta_H = 0.045$	2 years	2.5 years	0.36	0.32	0.32
$\delta_H = 0.04$	4.5 years	5.5 years	0.38	0.31	0.31
$\delta_H = 0.035$	7 years	10 years	0.42	0.29	0.29
$\delta_H = 0.03$	10 years	17 years	0.45	0.275	0.275
$\delta_H = 0.025$	14 years	28 years	0.5	0.25	0.25
$\delta_H = 0.015$	24 years	80 years	0.625	0.1875	0.1875
$\delta_H = 0.005$	46 years	460 years	0.8333	0.08333	0.08333

Debtor and creditor shares for increasingly patient holdout



Staggered swap to split surplus



Background: Argentina

- **2005 First swap** with 76% participation and 10 year RUFO clause. But vulture funds, claiming 100% + interest + costs, begin to litigate.
- As economy recovers, warrants increase greatly in value. Leads to **2010 second swap inside RUFO -** taking participation up to 93%.
- Argentina reckons that vultures have been defeated; closes settlement offer. But Judge Griesa finds in favour of NML with *pari passu* verdict.
- **RUFO clause expires with no offer**. Stalemate ensues.
- Dec 2015 New President. Negotiations are expected, but **is there a basis for compromise?**

Pari Passu ruling in favour of holdouts

- **CACs** - incuding Super Majority Voting - were supposed to prevent free-riding by vultures

- But the doctrine of **Pari Passu** has restored the ability of vultures to make profits Increases the negative externality of endogenous entry.

"… *being a holdout has become a veritable path to prosperity. It may take a while, but the rewards are really promising*". Lee Buchheit

In *amicus curiae* submissions, however, US Treasury and Stiglitz briefed against Judge Griesa.

Actions to block vultures

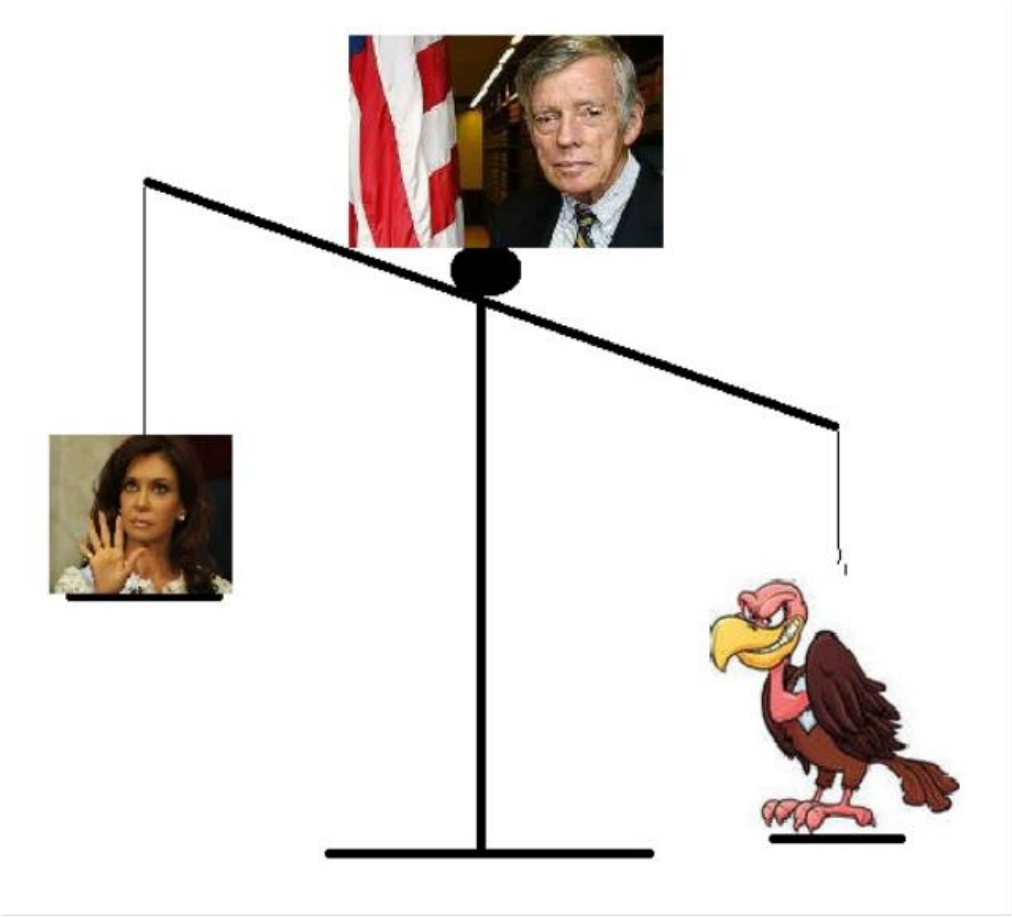
- For new contracts: CACs with **aggregation of voting** across all issues : ICMA has issued a 'boiler-plate' endorsed by IMF
- But what about existing contracts?

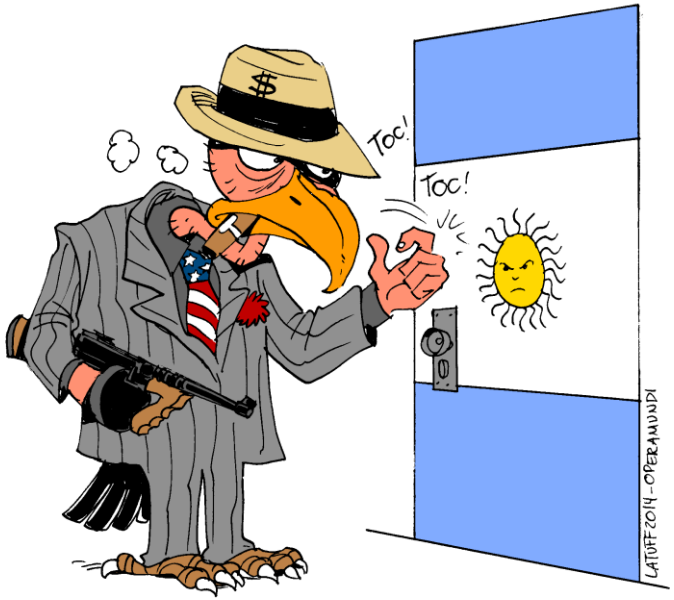
(a)There are **competitive pressures** to bypass NY law bonds: moving to London, Paris - or Shanghai?

(b) Possible **institutional intervention** to protect sovereigns: e.g. UN sets up protected channel for dividends? US President over-rules Judge Griesa?

Vultures v Argentina:

some images from Buenos Aires





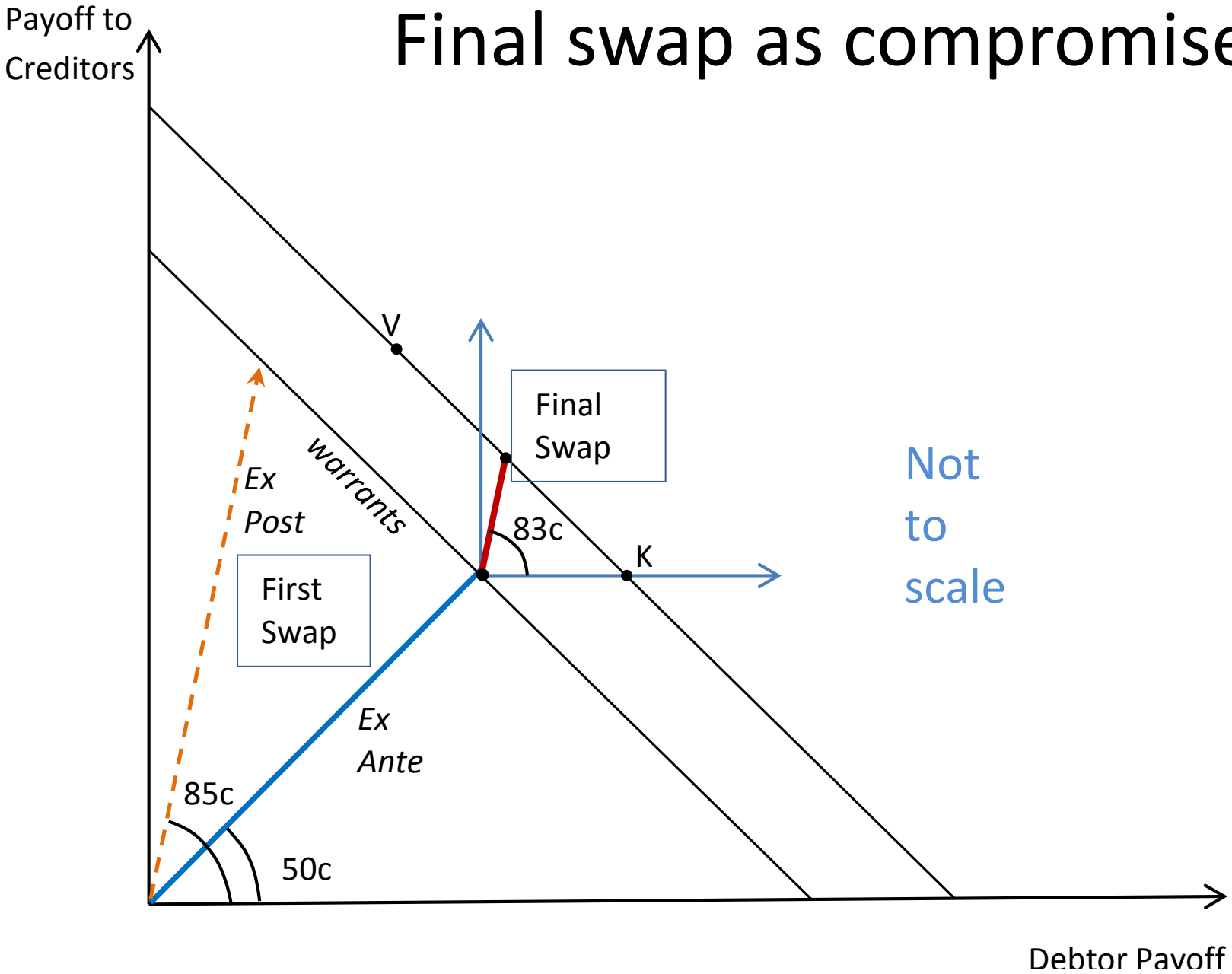
What about current holdouts? How about applying modified Rubinstein approach?

- First: **holdouts to be given compensation for the extra delay they have experienced**, with the compensation calculated at their own subjective rate of discount (i.e. their cost of waiting).
- Second: this compensation be **added to the settlement reached at time of the first swap** with the exchange bond holders (with appropriate up-rating to cover the fall in the value of the dollar since then).

Example of compromise?

- Thus, if the First Swap was seen **at the time** to be worth 50 cents per dollar of face value
- Cumulating over a decade at discount rate for holdouts of say 3% p.a. and adding 2% p.a. for dollar inflation implies increase by factor of 1.65
- This gives a Final Swap of about 84 cents in the dollar when ten-year RUFO clause expires.
- Note that this is similar to what Prat-Gay (2014) said the First Swap was worth **with max warrant payout**

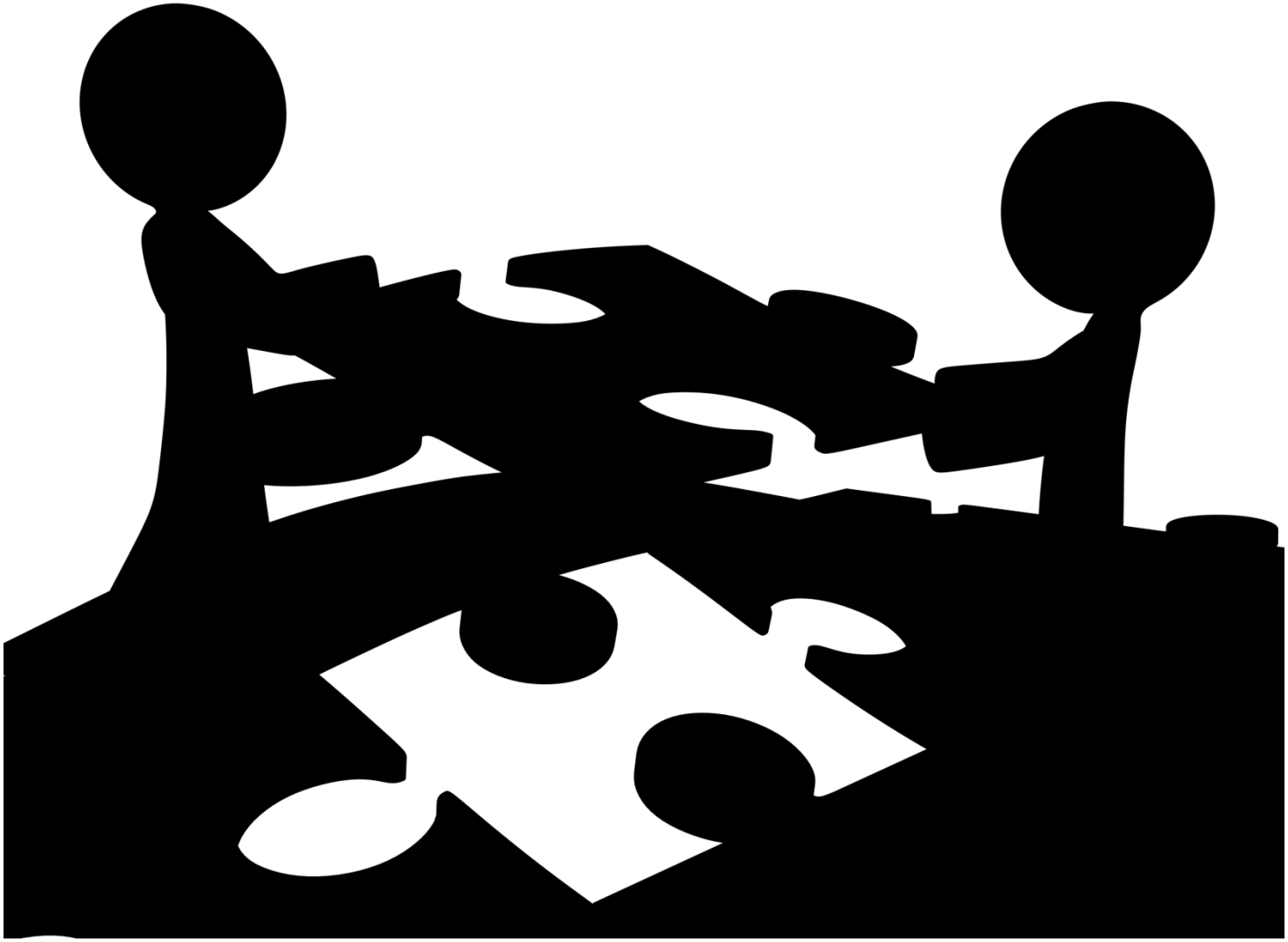
Final swap as compromise



Conclusion

- For new contracts: CACs with **aggregation of voting** across all issues should block endogenous patient entrants into creditor pool.
- What about existing contracts?
- A modified Rubinstein approach implies that patient creditors should get **uplift on early swap based** on their own patient discount rate.
- Could this be a guideline for mediator? If so, it would be 'as if' the holdouts had accepted the 2005 swap with generous warrants.

Solving the puzzle?



Back to the future?