

Individual versus Collective Creditor Rights in Sovereign Bond Restructurings: An Economic Analysis

PhD Thesis

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Preface

Introduction

This PhD thesis consists of a collection of three articles. Each of them is intended as a stand-alone publication, which means that it should be accessible to a reader who is neither familiar with the literature that the papers refer to, nor with the wider debate on the reform of sovereign debt restructuring. The target audience which I had in mind while writing will, however, possess a basic understanding of economic concepts and econometric methodology, and will be open to legal questions despite perhaps never formally having studied the law. The stand-alone character of the papers has two important implications for anyone who cares to read these lines. First, as each paper must introduce and define important concepts, a reader of the entire thesis will necessarily find a degree of repetition and overlap. I apologise in advance for any ennui that may result. Second, as each paper necessarily introduces the reader to the topic, there is no point in doing so here. Instead, I would like to use this space to provide a personal view on the research that forms the basis of the thesis. I wish to share with the reader the train of thought that led from one article to the next, my learning process and the approach that I took towards the research. Lastly, I shall take the liberty to use a somewhat looser style compared to the matter-of-fact language of the papers.

A further way in which this thesis may deviate from its peers is that it makes no attempt to comprehensive and systematic coverage of a given topic. Instead, each paper addresses a clearly defined research question in whichever way I have deemed suitable. In that sense, the thesis is perhaps closer to the Anglo-Saxon academic tradition than to the German one. Its refusal to be tied down to any particular area of law, or law and economics, may puzzle the traditionally-minded reader. (Is it contract law? Is it international law? Is it financial markets law?) I am willing to take that risk for the benefit of readability and applicability to real-life policy questions.

If there is a research question that spans the whole thesis, it must be along the lines of, “Is it better for bondholders to deal with a sovereign debtor individually or collectively in times of crisis?” As the

research progressed, I came to appreciate the crucial importance of this question. Not only will the contractual details of a sovereign bond impact upon the ease with which the national debt can be restructured after a default and therefore how much the population will suffer. Such details will also determine the attractiveness of the debt instrument for investors and thus play a significant role in the country's ability to borrow in international financial markets - in other words, its ability to grow. Recent and ongoing experiences in Europe tell us how painfully relevant these matters are today. Greek-style bailouts of sovereign borrowers using taxpayers' money are not inevitable if only the procedures were in place for an orderly debt restructuring - plus the political will to let the creators of the problem shoulder the burden. But this is not where the story begins.

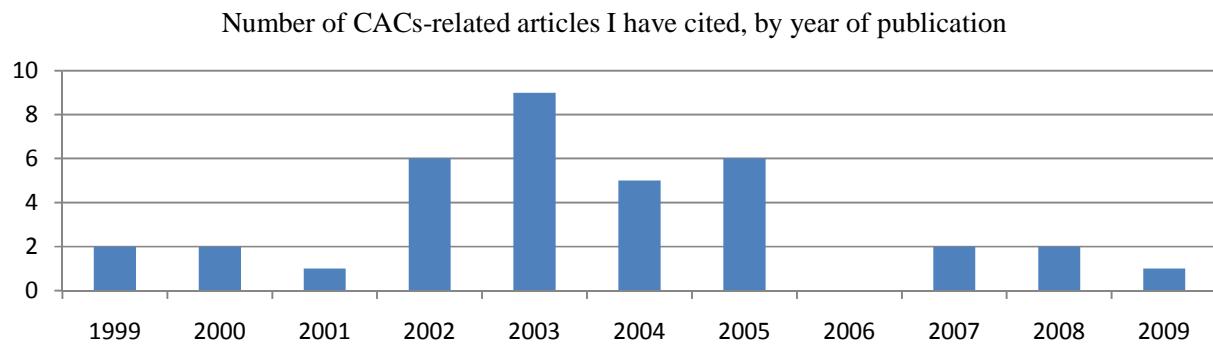
Collective Action Clauses in International Sovereign Bonds - Whence the Opposition?

The story of this thesis begins on a train ride in the Netherlands in mid-October 2005. Returning from a Board Meeting of the European Master Programme in Law and Economics in Rotterdam, my supervisor-to-be Hans-Bernd Schäfer asked me if I had thought of a topic for my dissertation yet. Since I had not, and since he remembered my undergraduate degree was in Financial Economics, he suggested that I investigate a phenomenon that touched upon his own research interest in bankruptcy procedures for states. Apparently there was a difference between bonds traded in London and those traded in New York with respect to what bondholders could do in the case of default. And this difference was or was not reflected in the interest rates; either way he said that this was something worth looking into. I gratefully accepted the suggestion and started from what can only be described as scratch.

Through initially aimless and therefore tedious reading I learned that the contractual details that cause the said differences are called collective action clauses (CACs), that these clauses allow a supermajority of bondholders to grant debt relief to the debtor country, and that roughly half of the bonds in the market contain the clauses. I understood that the presence of these clauses is not determined by the market in which they trade, nor - a common misperception - by the laws which govern the bond contract, but rather by a free choice of the issuer, though there are admittedly strong forces of market tradition

which will make a bond more likely to contain the clauses in some circumstances than in others. I also learned that CACs could lead to much more efficient sovereign debt restructurings once they are included in all bond contracts, but that various initiatives to promote their use had so far been unsuccessful. And so my first research question materialized: Why does the market hesitate to embrace these apparently beneficial clauses? Half-way though writing the paper, it then dawned on me that a very important development had escaped my attention: Market practice had in fact changed dramatically following a landmark debt issue by Mexico in 2003. This simple fact of course threatened to ridicule much of what I had planned to write. With hindsight, I can partly see how this lapse could happen.

Reforms of the structure of creditor rights in sovereign bonds are high up on the agenda in academic and policy circles but receive almost no attention in the popular media. As a result, a researcher must rely on academic publications and a handful of reports by international financial institutions, such as the IMF. Both categories of sources operate, as we know, with a time lag. As a consequence, the shift in market practice did not make its way into the literature until 2004, by which time interest in CACs had already waned. The figure below graphs the number of publications per year that I cite in the thesis.



The small number of publications on the right hand side of the graph had not yet been written when my research began. As for those published in 2005 which might have alerted me to my oversight, well, I missed them initially.

The realization that I seemed to be on the wrong track was of course devastating at first. But as I read on, I found that all was not lost. While the debt issue by Mexico was celebrated as a breakthrough for CACs, not all subsequent issues contained the clauses. The share of new debt that allows for collective action has undoubtedly increased but the remaining fraction that does not contain the clauses will continue to pose a serious obstacle to sovereign debt restructurings for decades to come. So the need for reform is in fact almost as great as ever, and so is the need for research into the markets' attitude towards collective action in bond restructurings. With a slight rephrasing of the research question - Why did the market not adopt CACs more readily and more completely? - the paper was saved.

Still I felt that academic interest had moved on, ignoring the fact that the issue of CACs was far from concluded. But then Fate sent along the financial crisis that began in 2008, just as I'd finished the paper. I am quite prepared to attribute to this coincidence the fortunate fact that the paper was, after a 'revise and resubmit', accepted by the first journal that I (seriously) approached. It eventually appeared in the December 2009 edition of the *Journal of Economic Surveys*. The debt crises that followed the global economic crisis must then have prompted Robert W. Kolb of Loyola University, Chicago, to edit a volume on *Sovereign Debt: From Safety to Default*, and I feel honoured to have been invited to contribute. A shortened and updated version of my first paper will thus be published in that volume in 2011, along with the contributions of some fairly well-known authors in the field. It will then have been almost four years since I first presented the paper to the Graduate School in Law and Economics at the University of Hamburg.

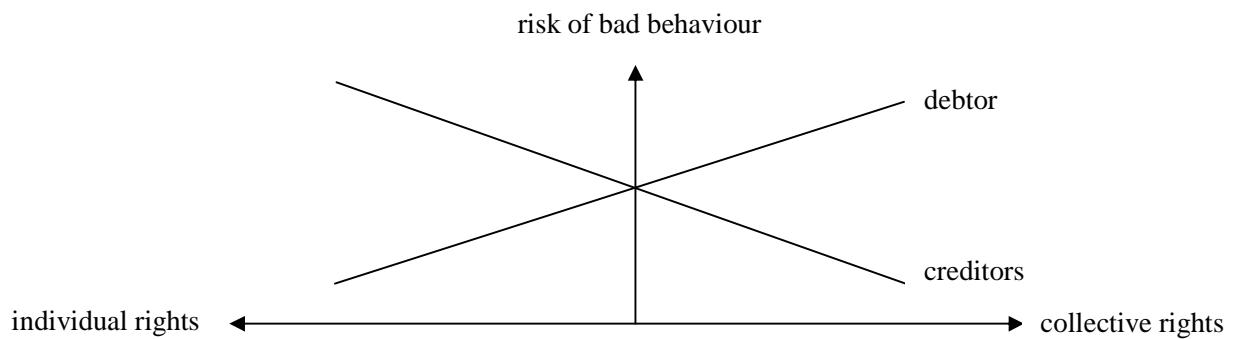
Individual Enforcement Rights in International Sovereign Bonds

Researching collective action clauses, it became clear to me that there are several ways in which bondholders can and will misbehave if given the wrong incentives, and CACs can prevent only some of them. They do put a stop to the strategy of holding out, i.e. refusing to participate in a restructuring in the hope of being repaid in full when the debtor country is once again solvent. But the clauses cannot cure a related problem, the so-called 'maverick litigation'. Where bondholders have the individual right to take

legal action to enforce their claims, they may sue the sovereign for full repayment in the period between default and the conclusion of the restructuring, even with CACs. Such individual litigation can be harmful in much the same way as holding out: The gains to the individual bondholder who acts selfishly are much smaller than the damage done to fellow bondholders, to the debtor country, and to third parties.

Whether or not bondholders have individual rights of legal action depends on what I later termed the ‘governance structure’ of a bond. As with CACs, roughly half of all outstanding bonds imply individual enforcement rights, while the other half prescribe collective action through a bondholder representative, the trustee. Trustees and collective action clauses are complements. Where both are in place, there is almost no room for bondholder behaviour which is inefficient from a social welfare perspective.

The benefits of the two related contractual arrangements were immediately clear to me; they appeal to an economist’s reasoning in terms of collective action problems, prisoners’ dilemma, etc. I could also understand the downside. To prescribe an orderly restructuring process is to make it easier for the sovereign to default. The relevant literature has ‘moral hazard’ written all over it. But not until I read an article by Jill E. Fish and Caroline Gentile - two legal scholars, as it happens - did I realize that one can seriously claim that the survival of the sovereign debt market depends on the bondholders’ ability to individually enforce their claims. I understood that by designing enforcement rights along the individual to collective scale, one can influence the trade-off between bad behaviour on the part of bondholders and bad behaviour on the part of debtors, as the figure below illustrates.



If the literature cannot agree which type of misbehaviour is the more serious threat to welfare, I wondered if the market has anything to say on the trade-off. This is what I investigate in the second paper.

In September 2000, a court case was concluded in which the investment fund Elliott Associates successfully pressured the Public of Peru for full repayment of debt claims which Elliott had acquired years before on the secondary market. This was a high-profile case of decidedly blunt debt enforcement by an individual creditor, and it was thus ideal for testing investors' attitudes. Contrary to claims in the literature that the case had the potential for wrecking the future of sovereign debt markets, I find no systematic bond market reaction to the events. It seems that the excitement of academics was not matched by market sentiment. I use this result to conclude that if investors are not overly concerned about the nature of enforcement rights, policy makers should push for the contractual standard they think is best, which is clearly a structure of collective rights.

This second paper received a 'revise and resubmit' from the *International Review of Law and Economics*. The referees said that the empirical methodology was non-standard (spot the euphemism) and the structure of the theoretical parts was suboptimal. Re-reading my text I could not help but agree and I have therefore re-written the entire article and implemented major changes to the estimation strategy. The referee, however, was not appeased, so I submitted the paper instead to the *European Journal of Law and Economics*, where it is currently under review. I have salvaged a two-page description of the history of sovereign bond enforcement from the first version for this thesis, which I omitted at the suggestion of the referees from the revised version of the paper. (Otherwise the versions of the three papers in the thesis are identical to the published or submitted ones.) The paper was presented at the annual meeting of the German Association of Law and Economics at Innsbruck University in December 2008, as well as before the Graduate School in Hamburg.

Trustees versus Fiscal Agents and Default Risk in International Sovereign Bonds

Then came Berkeley. During the PhD workshop at Gerzensee (Switzerland) in June 2008 I asked Bob Cooter, who taught one of the courses, if I could attend the University of California as a visiting scholar

the following year. He offered to host me without any hesitation. I was also fortunate to be granted research leave from the Institute of Law and Economics on very generous terms. Financial support from the German Academic Exchange Service is also gratefully acknowledged, although from an ex post perspective I am tempted to say that the funding was only just worth the effort of applying for the grant.

The preparations for the stay were naturally burdensome, what with visas to be obtained, requirements from Berkeley to be complied with, etc. One of the most difficult tasks, however, was to write up a research proposal. That is because I did not at the time have a very clear idea about the subject of my third paper. I had a vague feeling that there was more to be said about governance structure, and I wanted to do further empirical analysis, but that was about the extent of it. This situation was largely unchanged upon arrival in Berkeley. Fishing for ideas, I began to browse through my research to date. After a few dead leads, I suddenly saw the light: In the debate on collective action clauses, it has been stated that a major prerequisite for the change in market practice was the body of evidence suggesting that there was no difference in borrowing costs between bonds with and without the clauses. In other words, issuers need not fear to be punished for contractual innovation. That same evidence was so far entirely lacking with respect to trust structures, even though it is equally plausible that comparable research will help to effectuate market reform in this sphere as well. So to deliver a meaningful contribution to the literature on trustees I quite simply had to replicate the empirical literature on CACs (which I had summarised in my first paper) and apply it to governance structure.

From then on, motivation levels soared. I began to engage in productive scientific exchange, speaking to almost all members of the Berkeley staff who were - or whom I thought to be - knowledgeable in the relevant areas to see what they thought of my planned research. Everyone was extremely helpful and kind: Richard Buxbaum, who took the time to teach me to use legal databases; Barry Eichengreen, who has published extensively on CACs; Dan Rubinfeld, who, it turned out, had written his PhD thesis on default risk in municipal bonds. I was amazed by the openness of economists to legal issues and vice versa; in fact the distinction was not obvious and it did not seem to matter. It was perfectly natural for researchers of either discipline to approach a legal question with economic

instruments. The professors addressed the questions I had with whatever knowledge or contacts they had at hand, and I was rarely ever told that my request was out of their area of expertise. Perhaps not coincidentally, the only exception was a German professor. Contacts by email and telephone to researchers elsewhere in the United States, including Ashoka Mody (IMF), Anna Gelpern (American University), Michael Chamberlin (Emerging Markets Traders Association), and in particular Lee Buchheit (Cleary Gottlieb Steen & Hamilton LLP), also proved to be very valuable.

My next task was to find access to the necessary data. It took quite a few conversations with researchers and library staff for me to establish that what I needed was indeed available at the Haas School of Business: a Bloomberg terminal. Another few conversations later, I had actually opened my Bloomberg account and was able to start searching and eventually downloading the data that I needed for the empirical analysis. After that it was merely a matter of running the regressions and preparing the write-up, all the while checking and rethinking my hypotheses. The results confirmed my priors inasmuch as there is no conclusive evidence to suggest that the markets discriminate between bonds based on their governance structure. Trustees are not perceived as increasing default risk in sovereign bonds. The policy implications are the same as for collective action clauses: If an efficiency-increasing innovation does not fare worse than the status quo on the trading floor, those concerned with welfare (public sector institutions and legislators) should press for its implementation.

The paper was finished shortly after my return from Berkeley and presented before the Graduate School and at the 2009 conference of the German Association of Law and Economics, this time at the University of Trier. Although I hold this paper to be the strongest of the three in terms of novelty and contribution to the literature, it was rejected by the *Review of Law and Economics* and *KYKLOS*. The *European Journal of Law and Economics*, however, subsequently accepted it without hesitation. It became available on the Springer website on December 23rd, 2010; publication in the traditional form will presumably follow shortly.

Acknowledgements

I gratefully acknowledge the support received from my supervisor, Prof. Dr. Hans-Bernd Schäfer, and from the professors and colleagues at the Institute of Law and Economics, in particular Prof. Dr. Thomas Eger. Personal thanks go to two women and one small boy who were, at some point and in some way or other, with me while writing this thesis.

Specifically with regard to the first paper, I am grateful to Hans-Bernd Schäfer for the initial stimulus and valuable comments and to Jasmine Bennöhr for proofreading. I am also indebted to two anonymous referees for constructive criticism. The article was published in 2009 in the Journal of Economic Survey 23(5).

For the second paper, I owe thanks to Hans-Bernd Schäfer for input and support, and I gratefully acknowledge helpful comments from Jonathan Klick, Jan-Peter Sasse, Jan-Philipp Rock, Katharina Stepping, conference participants at Innsbruck University, and two anonymous referees.

For the third paper, finally, I am indebted for support to Hans-Bernd Schäfer, Thomas Eger, Robert Cooter, and to the German Academic Exchange Service. Thanks for help and comments go to Richard Buxbaum, Barry Eichengreen, Mitu Gulati, Ashoka Mody, Dan Rubinfeld, Florian Lohff, Sang-Min Park, Stefan Voigt, and in particular to Jan-Philipp Rock, Lee Buchheit and Michael Chamberlin. The article has been accepted for publication by the European Journal of Law and Economics.

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Collective Action Clauses in International Sovereign Bond Contracts – Whence the Opposition?

Sönke Hässeler

Abstract

The universal adoption of collective action clauses (CACs) was the most promising reform proposal in recent debates on sovereign debt crisis management. Academics and the official sector had been promoting CACs at least since 1995, yet market practice did not begin to change until 2003. This delay is often attributed to investors' and sovereign borrowers' opposition to CACs.

This paper evaluates the publicly stated as well as the suspected private motives of the two sides to block the spread of CACs. It draws on a wide range of existing evidence and adds some new theoretical considerations to show that there is no reason to be sceptical of CACs unless bailouts exist as an alternative crisis resolution mechanism. This conclusion may be of interest purely for the sake of historical accuracy. But more importantly, it may help to better understand and assess any potential future resistance from market participants, e.g. in the process of introducing CACs in bonds governed by German law.

Keywords: sovereign debt restructuring, sovereign default, collective action clauses, moral hazard

JEL classification: F34, K33, K12

1 - Introduction

1.1 - Problems of sovereign bond restructuring

The third wave of emerging market debt crises in the 20th century began in late 1994 with the Mexican Peso crisis and culminated in the Argentine crisis in 2002. In many instances, sovereign defaults were cured or averted through large-scale assistance from international financial institutions. For example, Mexico was given a \$ 50 billion loan from the United States Treasury, the International Monetary Fund (IMF), the Bank for International Settlements, and the Bank of Canada. Such a ‘bailout’ of private creditors by the official sector, though suboptimal in many respects, was seen as necessary in the absence of a viable alternative means of crisis resolution. “We lack incentives to help countries with unsustainable debts resolve them promptly and in an orderly way. At present the only available mechanism requires the international community to bail out the private creditors”, said Anne O. Krueger, First Deputy Managing Director of the IMF, in November 2001 (Krueger, 2001).

This pessimistic view of sovereign default is partly grounded in history. Up until the 1930s, particularly Latin American governments issued large amounts of debt in the form of bonds sold to foreign private investors. Most of these countries defaulted on their obligations in the course of the Great Depression. Absent any pre-defined procedures for representing and coordinating the multitude of bondholders, negotiations over debt relief were lengthy, in some cases being concluded only in the 1960s.¹ As a result, private lending to emerging market sovereigns stopped and was replaced by loans from other governments and international development banks.

By the 1970s, commercial banks had replaced the official sector as the biggest lenders to developing country governments. The second wave of Latin American defaults set in during the 1980s and the banks

¹ For a more detailed description of the development of the sovereign debt markets, see Sturzenegger and Zettelmeyer (2006b) or Aggarwal (2003).

were seeking to cut their losses and exit the bond market. The opportunity to do so came in the form of the Brady Plan: The non-performing bank loans were transformed into Brady bonds that were sold to international investors at deep discounts, which set the stage for a revival of the sovereign bond market.

When the Peso crisis of 1994 heralded the third wave of defaults, there was reason to expect that this time around, it was even less likely than before that the private sector would be able to agree on debt relief and thereby to overcome the crisis by itself. Firstly, compared to the 1930s, bond ownership was even more dispersed. Furthermore, successive changes in legislation and in the attitude of U.S. courts towards sovereign immunity had opened the doors to bondholder litigation, and thus made successful restructurings even less likely. Secondly, compared to the 1980s, the debt instruments were less flexible and the number of creditors tended to be larger.² For the restructuring of syndicated bank loans and inter-government loans, the so-called London Club and Paris Club, respectively, provide a forum for negotiations between a relatively small number of creditors, who interact repeatedly and are therefore less likely to act opportunistically (White, 2002). No institution of that sort exists for sovereign bonds.

Indeed, as of the 1990s, it seemed virtually impossible for a sovereign debtor to obtain debt relief from its bondholders in an orderly manner. The majority of bonds outstanding contained so-called *unanimous consent clauses*, that is, the payment terms of the contract (such as maturity date and interest rate) cannot be amended unless all bondholders agree to the change. In practice, unanimous approval is impossible for several reasons.

First, there is a *communication problem*. Even the remotest bondholder would have to be informed and convinced of the proposed change of terms, however small his share of the issue may be. The holdings of international sovereign bonds are widely dispersed and bonds tend to be in bearer form (Liu, 2002), making it quite likely that some bondholders will not be contactable. Related to this is the

² The latter comparison is but a stylised fact. Nearly 1000 bank creditors were involved in the 1982 Mexican debt crisis (Boughton, 2001), whereas Pakistan and Ukraine had a very limited number of bondholders in the late 1990s (Sturzenegger and Zettelmeyer, 2006b). Yet again, Argentina had more than 700,000 bondholders in 2002 (Garcia-Hamilton *et al.*, 2005) – a number of creditors that is surely unattained by any syndicate of banks.

representation problem. Often it was not clear who can legitimately speak on behalf of the bondholders when negotiating the restructuring terms with the debtor.

Second, the *heterogeneity* of bondholders means that, in order to achieve full approval, even the investor who is most optimistic about the repayment prospects has to give his consent.³ A restructuring that is welcomed by all bondholders is unlikely to bring any relief to the sovereign.

Third, and most importantly, unanimous consent requirements give rise to opportunistic behaviour on the part of bondholders. If all bondholders but one endorse the restructuring, the holdout investor is in a position of enormous bargaining power vis à vis his fellow investors. In theory, he could demand as a bribe for agreeing to the restructuring as much as the cumulative benefits from restructuring of all other investors and the debtor. But so could another holdout, and another. An unravelling process would ensue, resulting in an equilibrium which makes unanimous consent impossible and everyone worse off: a classic prisoners' dilemma as illustrated in figure 1.

		B	
		grant deferment	litigate
A	grant deferment	80/80	60/90
	litigate	90/60	70/70

Figure 1: The debt relief game

Suppose the debtor announces to its two creditors that it must suspend interest payments on the debt for a specified period. If both A and B agree to the rescheduling, the net present value of their investments falls to 80%. But given that A grants deferment, the debtor's ability to pay increases so that B will rationally

³ For the implications of creditor heterogeneity, see Fisch and Gentile (2004); Miller and Thomas (2006).

hold out, accelerate its claims and, if necessary, bring action against the debtor to the detriment of A. Since neither creditor can credibly commit not to litigate, both creditors refuse the restructuring offer in the only equilibrium of the game. Wasteful litigation and delays reduce the payoffs to 70%. Thus there is a serious *collective action problem* resulting from the discrepancy between what is rational for the individual bondholders and what is best for creditors collectively. While collective action problems exist also among banks or governments, these groups of creditors are typically not nearly as large, diverse, and anonymous as bondholders.

All of these difficulties have contributed to sovereigns hesitating to approach their creditors at times of crisis. If the restructuring process looks to be lengthy and uncertain, debtors are often tempted to admit default only at the last possible moment, thereby aggravating the crisis. While some argue that default must be costly in order to maintain market discipline and keep moral hazard at a minimum, most would agree that a substantial fraction of the losses incurred in disorderly debt crises constitute a deadweight loss that often falls on parties not directly involved, such as the debtor country's population.

These bleak prospects for restructuring sovereign bonds, paired with the apparent lack of alternatives, motivated the series of public-sector bailouts during the second half of the 1990s. However, the turn of the century was accompanied by a turn in the political climate. The Bush administration was much less inclined towards assisting financially troubled developing countries than the Clinton administration, and it pressed for alternatives to bailouts, in particular for 'private sector involvement' in resolving sovereign debt crises. A number of academics joined the rally against bailouts, condemning in particular the moral hazard effects.⁴

The private sector's standard reply to the ensuing reform proposals was that, contrary to Ms Krueger's statement, a possibility to restructure even bonds with unanimous consent clauses in fact already existed and worked sufficiently well. This 'ad hoc' approach revolved around exchange offers. The idea is

⁴ See Gulati and Gelpern (2007) for the political background of the debate on CACs. See also Portes (2003): "The first and simplest principle is that big bailout packages cannot and should not continue. IMF resources are stretched, and G7 governments have little appetite for further action..."

simple: If the payment terms of the existing bonds cannot be changed, the bonds themselves have to be exchanged. Countries like Pakistan, Ecuador, Ukraine, and Russia were all able to settle their debt problems by unilaterally offering to their bondholders new securities with less stringent payment terms in exchange for the outstanding bonds. In combination with exit consents (discussed in Section 2), exchange offers received support not only from practitioners but also from academics,⁵ hence it is surprising that they were largely ignored by the public sector despite their success record as a crisis resolution mechanism. Instead, after several years of indecision, the public sector homed in on supporting the universal adoption of *collective action clauses* in sovereign bond contracts as the most promising way of changing the international financial architecture for better debt crisis resolution.

1.2 - Collective Action Clauses

The term collective action clauses encompasses a number of contractual provisions; there is still no consensus as to which set of clauses is best suited to improve debt restructurings. However, two particular aspects are generally thought to be central to the process, so we will speak of CACs only when a bond contract contains both types of provisions.

Majority restructuring or majority action provisions enable a super-majority of bondholders (typically two thirds to three quarters) to change the payment terms of the contract, and to make this change binding for all bondholders. Moreover they regulate the conduct of bondholder meetings and set quorum requirements. These provisions thus solve the collective action problem. The benefits of majority restructuring for coordination among bondholders are modelled, amongst others, in Eichengreen *et al* (2003), Weinschelbaum and Wynne (2005), and Ghosal and Thampanishvong (2007).

Majority enforcement or non-acceleration provisions enable a majority of bondholders to prevent an individual investor from accelerating the bond or initiating litigation in the event of default, and to reverse

⁵ See the literature by Lee Buchheit, a practitioner and academic, who has been credited as “The Man Who Invented Exit Consents” (Gulati and Gelpern, 2007).

acceleration. Their value lies in reducing the incentives for ‘rogue creditors’ to hold out by making it more difficult to enforce the contract against the interests of the majority.

Other types of CACs that have been discussed include *collective representation clauses*, which determine the way in which bondholders are represented in consultations or negotiations with the debtor; *sharing clauses*, which postulate that any proceeds from legal action against the debtor be shared on a pro rata basis among all bondholders; and *aggregation clauses*, which regulate the aggregation of different bond issues for the purpose of voting on a restructuring.

Collective action clauses are by no means an invention of the last decade but have been a feature of international sovereign bonds governed by English law for more than a century. CACs were introduced into English corporate bonds in the nineteenth century specifically to counter the problem of holdouts, and were soon adopted for sovereign bonds (Lui, 2002). Bonds governed by the laws of Luxembourg and Japan also routinely contain CACs. Taken together, these jurisdictions accounted for around 38% of all outstanding bonds in mid-2003 (IMF, 2003b). Almost all other international sovereign bonds are governed by German (13%) or New York (49%) law, neither of which prohibits the use of CACs. However, until recently the clauses were not common in the US market⁶ and are still lacking in bonds governed by German law, although there are efforts to promote the use of CACs in the German market.

Despite having been in existence for a long time, CACs appear to have been rediscovered for the purpose of facilitating debt restructurings only relatively recently. Eichengreen and Portes (1995)⁷ was the first of a series of publications and statements, mainly from academics and official sector representatives, who called for the more wide-spread adoption of collective action clauses. Examples include the G-10 “Rey Report” in 1996, the G-10 report on “The resolution of sovereign liquidity crises” in 1997, the 1998 report by the G-22 Working Group on International Financial Crises, as well as a series of speeches by

⁶ Bonds governed by New York law have, however, traditionally contained majority enforcement clauses.

⁷ Eichengreen, B. and R. Portes (1995) “Crisis? What Crisis? Orderly Workouts for Sovereign Debtors” London, Centre for Economic Policy Research. Rogoff and Zettelmeyer (2002) cite much earlier work of the 1970s and 1980s which features reform proposals not dissimilar to the ones discussed today. However, the simple adoption of English-style CACs under New York law does not appear to have been seriously considered before the mid-1990s.

international financial institution officials, most notably Anne Krueger and John Taylor, the Undersecretary for International Affairs at the US Treasury. In 2002, the looming Argentine crisis brought a sense of urgency to the debate and led to the Treasury's increased efforts to find alternatives to bailout (Gelpern and Gulati, 2007).

However, the concerted support for CACs did not have any noticeable effects until March 2003. At that time Mexico made a large issue governed by New York law, but including CACs, and initiated a reversal of market practice in the U.S., where almost all subsequent bond issues have made use of the clauses. Within a year, issuing with CACs had changed from being the exception to being standard. As of February 2006, the share of outstanding bonds with CACs had already increased to 60% (IMF, 2006). In the period 2004 to 2007, the share of newly-issued bonds with CACs in the US market was 92%. The most recent figures on the prevalence of CACs are provided by Bradley *et al* (2008, p. 31), as reproduced graphically below.

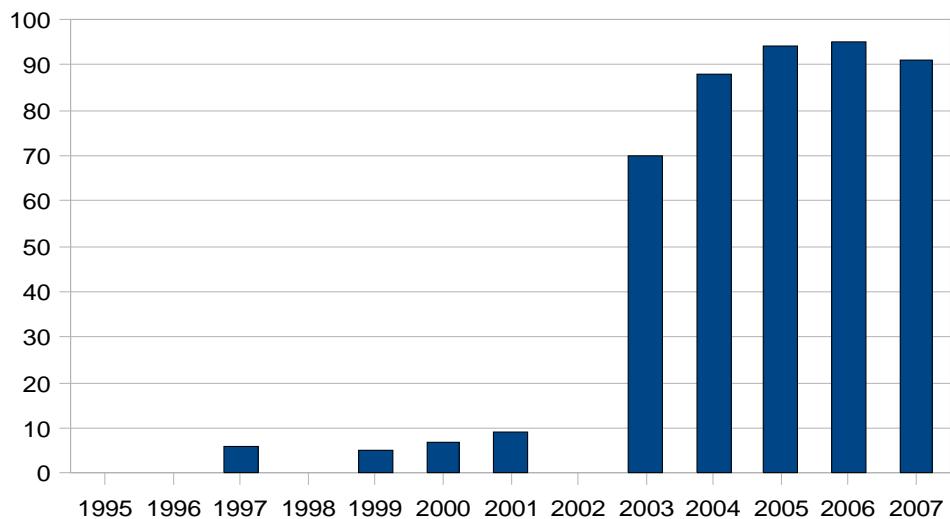


Figure 2 – Percentage of new issues that contain CACs – source: Bradley *et al* (2008)

Yet, the completeness of the shift cannot conceal the fact that there was a time lag of several years between the first public sector endorsement of the wider use of CACs and the first effects on market

practice. In the year prior to the shift, the IMF (2002a) noted that “despite broad agreement in the official community on the merits of collective action clauses, official calls for their broader use have had little impact on market practice to date.”

The time lag is often attributed to the fact that market participants were for some time strongly opposed to CACs. In particular, borrowers feared that New York law bonds with CACs could be unattractive for investors and therefore hesitated to embrace the new provisions. Investors, in turn, cited a wide range of concern and are reported to have actively tried to discourage issuers from using CACs.

This paper critically evaluates the reasons for the hostility towards CACs that has come from both groups of market participants. It adds to the literature in that to date there is no systematic analysis of the incentives and disincentives that borrowers and lenders had towards CACs. Gelpern and Gulati (2007) arrive at similar insights, but through interviews with bond market decision makers, rather than through economic theory. Contrary to these authors, we follow the more conventional assumption that the clauses have tangible economic value, rather than being merely a signal of political goodwill.

The paper is structured as follows: Section 2 examines a number of theoretical aspects of the position of lenders, while the subsequent section surveys empirical and other evidence which suggests that investors probably never had a legitimate reason to oppose CACs. Section 4 focuses on the position of the sovereign borrowers. The final section concludes with some thoughts on the role of the international financial institutions.

2 - Investors

2.1 - Investor attitude

“Financial markets are hardly slow to innovate; they are criticized for many things but only rarely for their reluctance to develop new financial instruments” (Eichengreen *et al*, 2003, p. 33). Therefore inertia is not a satisfactory explanation for the fact that market practice with respect to CACs changed only in

2003, after several years of public sector pressure. At least one, if not both sides of the bond market must have had solid reasons to delay the adoption of the clauses in New York law bonds – that is, if the clauses are as beneficial as their proponents claimed.

Indeed, Jack Boorman (2002, p. 9) of the IMF recognised that “Resistance to CACs has been a persistent theme since the call in the Rey Report in 1995 to include them”. Tsatsaronis (1999, p. 22) mentions a “negative attitude [which] has been clearly documented in a survey of market participants conducted by the G-10 in 1995, as well as through recent statements in the financial press.” In a similar vein, Michael Chamberlin (2002b, p. 6), Executive Director of the Trade Association for the Emerging Markets, said: “I don’t think that collective action clauses are particularly necessary or, at least in the short to medium-term, feasible to implement.” (They were in fact implemented about eleven months later.) Eichengreen *et al* (2003, p. 7) quote creditor spokesmen as warning that “the more widespread adoption of collective action clauses would be perceived as an erosion of creditor rights”, and that there would be “a prohibitive increase in borrowing costs”.

Naturally, these statements cannot provide a comprehensive description of investor sentiment, which has moreover changed over time. The Emerging Markets Creditors Association (EMCA), together with several other trade organisations, released their “Model Covenants for New Sovereign Debt Issues” in May 2002, which incorporated most of the provisions discussed before in the CACs debate, and signalled the Association’s active involvement in the design of the new clauses. The Institute of International Finance, previously one of the fiercest opponents of collective action clauses, issued a special committee report in April 2002, endorsing the wide-spread use of CACs. Furthermore, “late in 2002, several executives responsible for large emerging market funds contacted the official sector and offered help with

getting a country to adopt CACs. They proposed a meeting to reassure high-quality issuers of their willingness to buy CAC bonds.”⁸ By 2003, open criticism of CACs was no longer to be found.

Several authors have attributed this apparent change of attitude to the emerging discussion about the so-called Sovereign Debt Restructuring Mechanism (SDRM). The SDRM was first introduced by Anne Krueger in November 2001 and was further detailed and developed in a series of speeches and papers by IMF officials throughout 2002. It envisaged a number of measures, such as a mandatory process for restructuring, standstills, and a strong role for the IMF, which threatened to encroach upon creditor rights much more than even the most far-reaching proposals for CACs ever would. Eichengreen *et al* (2003, p. 9) speculate that, “[f]aced with the possibility of a more radical solution, market participants, until recently unrelenting critics of collective action clauses, embraced them as, from their perspective, the lesser of evils.” Portes (2003, p. 13) even goes so far as to maintain that the SDRM’s purpose was mainly that of a threat, to be carried out if the private sector does not adopt CACs voluntarily: “The SDRM debate has been extremely useful but seems now to have fulfilled its role of stimulating progress towards implementation of feasible proposals, in particular CACs.” Of Gelpern and Gulati’s (2007, p. 20) interviewees, “only two said that the CACs shift might have happened without the threat of SDRM.”

Naturally, any view of the relationship between CACs and the SDRM is inevitably highly subjective. Various sides to the debate would strongly reject the notion that the proposal for the SDRM was in fact created with the sole purpose of making CACs look market friendly. The IMF variously regarded the SDRM as a superior alternative (Boorman, 2002) or a complement (Krueger, 2002) to CACs, but certainly as an initiative in its own right. For a brief period in 2001, the US Treasury even spearheaded the support for a statutory mechanism (O’Neill, 2001) before favouring CACs instead shortly thereafter. It does, however, seem that the change in market sentiment towards CACs during the year 2002 was at least partly motivated by tactical considerations rather than reflecting genuine growing enthusiasm for majority

⁸ Gelpern and Gulati (2007, p. 57). Again, attitudes were not homogeneous. At around the same time, the Mexican Finance Minister “went so far as to write a scathing 13-page letter to [Treasury Secretary Paul] O’Neill in November 2002, expressing his intractable opposition to both CACs and SDRM.” (*ibid*, p. 62)

action. For instance, the issuing of the “Model Covenants” could be seen as an attempt to at least influence the debate on CACs after realising that some progress in that direction could not be avoided altogether. Besides, it has been argued that the “Model Covenants” would have made restructuring even more difficult than it is under unanimous consent clauses.⁹

The IMF effectively dismissed the SDRM as not feasible at its 2003 Spring Meeting, following the landmark Mexican bond issue with CACs under New York law. The subsequent adoption of CACs in almost all new issues seems to indicate that investors have given up any reservations against the clauses. At the very least, though, their opposition in the years prior to 2003 remains a historical fact which has not yet been fully explained.

2.2 - Moral hazard

Before we embark on that explanation, it has to be stated that there are important reasons for investors to welcome the advance of collective action clauses, besides the wish to avoid having a SDRM imposed upon them. Kletzer (2003) shows that, because of more efficient lending and repayment, CACs yield a welfare gain relative to unanimous consent clauses under any realistic constellation of transaction costs.

An instance of sovereign default is by definition a period during which creditors receive no interest and / or repayment of principal. Once default has occurred, CACs are clearly valuable to investors by making it easier to reach a restructuring agreement so that payments can recommence.¹⁰ If the estimated probability of full repayment during default is sufficiently low, a reduction in the principal to be repaid will benefit creditors as the expected recovery rate increases, discount rates fall, and the market value of the debt rises. Furthermore, a restructuring agreement reached after negotiations between creditors and the debtor is more likely to benefit creditors than a unilateral exchange offer, possibly reinforced with exit

⁹ Simpson (2006), Gelpern and Gulati (2007). The “Model Covenants” set a very high voting threshold for majority action and at the same time made exit consents almost impossible, thus rendering bond restructurings even more difficult.

¹⁰ Tsatsaronis (1999) reports that the recovery rate for an international bond which has been in default for two years is estimated at around 25%. This is the kind of situation in which a speedy restructuring becomes very desirable for investors. See Ghosal and Miller (2003) for a theoretical discussion of recovery rates.

consents. We will discuss and analyse in turn the reasons why, according to some spokespersons, investors would rather forego these benefits.

The most often-cited objection to CACs was that they might make restructurings easier for the sovereign, and therefore more likely to happen. Creditors were, and perhaps still are afraid of opportunistic defaults, i.e. situations in which the sovereign is able, but not willing, to repay its debt, or situations in which the sovereign is squandering its credit, knowing that it will be relatively easy to obtain a partial debt relief: a classic case of moral hazard.¹¹ According to Chamberlin (2002a, p. 8), “Sovereign bondholders are genuinely concerned that making sovereign bonds easier to restructure will make restructurings (even) more likely.” Theoretical models of the sovereign debt restructuring process invariably formalise the possibility that CACs increase debtor moral hazard (Weinschelbaum and Wynne, 2005; Ghosal and Thampanishvong, 2007). If “making default unspeakably horrible was a necessary counterpart to the challenge of collecting from a sovereign government, most of whose assets are inaccessible to creditors” (Gelpern, 2003a, p. 5), then the advent of CACs would increasingly see sovereigns voluntarily defaulting and taking the risk of attachment of overseas assets, or so some investors feared. In that sense, investors face a time inconsistency problem: *Ex ante*, they want to make default as costly as possible to the sovereign in order to minimise moral hazard. But *ex post*, i.e. when default has occurred, they would prefer to benefit from faster restructuring as afforded by collective action clauses, so that debt service can continue.

Such thinking disregards what is probably the strongest incentive a sovereign has to service its debt, namely continued market access. In a debt situation with practically no collateral and no international institution that could unconditionally enforce creditor claims, considerations of reputation are of course of

¹¹ This is the first type of moral hazard in a sovereign debt setting. The second type arises in the relationship between the sovereign and international financial institutions (IFIs), who may feel obliged to provide a bail-out. The third type occurs between the IFIs and the lenders, and forms the basis of the debate about public sector versus private sector involvement, or “bail-outs” versus “bail-ins”, see Roubini (2002).

utmost importance.¹² Any sovereign who defaults will experience a sharp increase in borrowing costs, but the consequences are likely to be especially dire if market participants suspect that the default may have been opportunistic, rather than inevitable. As default becomes less costly with the introduction of CACs, sovereigns lose a commitment mechanism, and will therefore value their reputation with financial markets even more highly. Thus it is anything but certain that CACs lead to more defaults.

Esho *et al* (2004) provide some empirical evidence on the moral hazard effect of CACs, whose presence or absence is proxied by the choice of governing law. They regress the use or non-use of CACs in a sample of 2,749 corporate Eurobonds issued between 1993 and 2002 on a number of interesting explanatory variables, most notably on the use of public versus private placement. The results show that private issues are highly significant in explaining the use of collective action clauses, which the authors interpret to mean that issuers regard CACs and private placements as complements. According to their reasoning, issuers choose private placements to enable better monitoring of the borrower if a bond carries CACs which would otherwise exacerbate moral hazard.

Despite the high level of significance, there seems to be a distinct possibility that the relationship between governing law and distribution channel is spurious. The study relies heavily on the assumption that issuers make a very careful decision about governing law and collective action clauses; however, anecdotal evidence suggests that this is not the case.¹³ An issuer might decide to borrow in pounds sterling, which generally entails the use of UK law and thus CACs, and if private placements just happened to be more common in the UK than in other markets, the results of the study would be obtained without any underlying causation. It seems likely that a series of interviews with issuers and underwriters

¹² Eaton and Gersovitz (1981) started the literature on reputation in sovereign lending. For an overview of the ensuing development and criticism, see Sturzenegger and Zettelmeyer (2006a).

¹³ See Richards and Gugliatti (2003), discussed in section 3. It could be argued that issuers seem to have given some consideration to the questions of governing law and collective action clauses in recent years, but certainly much less so in the period covered by Esho *et al*.

would in fact dispel the paper's imputation about causality.¹⁴ A more general point of criticism is that the authors repeatedly refer to the debate on sovereign debt restructuring, even though their sample consists entirely of corporate bonds. Clearly corporate borrowers and their lenders have a different view on CACs than sovereign borrowers and their lenders do, so that the importance of the study in the sovereign debt debate should not be overrated.

2.3 - Majority enforcement

Part of the scepticism about collective action clauses seemed to revolve around the concern that they could lead to an erosion of creditors rights, in particular with respect to “the legitimate right of creditors to enforce their claims” (Chamberlin, 2002b, p. 3). “Contracts, even sovereign debts, should be enforceable. There is a growing perception in the bondholder community that they are not, and that creditor rights should be strengthened, not weakened”, said Michael Chamberlin in 2002 (*ibid*, p. 6).

However, enforcement is largely independent of the presence of CACs, at least if we abstract from the effects of majority restructuring provisions, which are discussed below. The rules of enforcement are mainly governed by majority enforcement clauses, which have traditionally been a feature of both English and New York law bonds. Four aspects of majority enforcement are important in the context of enforcement against a sovereign debtor: Acceleration, reversal of acceleration, initiation of legal proceedings, and sharing (Liu, 2002; Buchheit and Gulati, 2002).

Acceleration refers to the ability of bondholders to declare the bond payable immediately if it falls into arrears. This allows them to sue the borrower for the entire principal, rather than just the missed

¹⁴ The paper presents several other interesting, but arguably somewhat shaky results. For instance, it is found that firms with high intangible asset ratios tend to avoid CACs because, so the authors argue, a high level of intangible assets creates information asymmetries between the borrower and its lenders, and the firm will choose unanimous consent clauses to signal that it will not take advantage of these asymmetries in a restructuring. Here, again, the assumed chain of causation is rather involved, suggesting that the results may be spurious. The following explanation for the finding is much simpler and implies no causation: US firms have customarily issued without CACs, and they also tend to have high intangible asset ratios purely because these ratios are usually higher in advanced economies such as the United States.

interest payments. Thus, absent the right to acceleration, bondholders have very little incentive, either individually or collectively, to initiate legal action against the sovereign. If *reversal of acceleration* is possible, a qualified majority of bondholders can render any attempts by maverick investors to litigate unprofitable. Reversal of acceleration can act as an important counterbalance to prevent a ‘grab race’ where individual acceleration is possible. Sovereign bonds also differ in their rules regarding the *initiation of legal proceedings*. This right rests either with each individual bondholder or with the representative of a certain proportion of bondholders. Finally, a bond contract may stipulate that the proceeds of any legal action against the debtor be shared among all bondholders on a *pro rata* basis. Such *sharing* clauses are perhaps the simplest and most effective deterrent against maverick litigation.

Bond contracts often differ along these four dimensions, depending on their administrative structure. In the United States, the most common form is that of a *fiscal agency agreement*, where the fiscal agent has no relationship with the bondholders other than to make payments of interest and principal. By contrast, English law bonds are often issued under a *trust deed*. The trustee acts on behalf of the bondholders and has substantial powers to enforce their claims against the sovereign.

Figure 3 shows how majority restructuring provisions are typically implemented under fiscal agency agreements and trust deeds.

	Fiscal Agency Agreement	Trust Deed
Acceleration	sometimes an individual bondholder can accelerate her own bonds; usually a vote by 25% can accelerate the entire issue	not possible individually; trustee can accelerate independently or when instructed by 25% of outstanding principal
Reversal of Acceleration	possible in most cases, 50% or 75% majority required	not possible (can be achieved with majority restructuring)
Initiation of Legal Proceedings	by individual bondholders	delegated to trustee (independently or when requested by 20-25%)
Sharing	no	yes

Figure 3 – Enforcement under fiscal agency agreements and trust deeds

It is not possible for an individual bondholder to pursue legal action against the debtor under an English-style trust deed. Under a fiscal agency agreement, however, some bonds allow individual legal action and acceleration, and the bondholder is not obliged to share the proceeds of litigation. Thus, many American investors have a marginally better standing with respect to enforcement than their counterparts under English law, but this is due to different issuing structures, not to CACs. The recent inclusion of CACs in New York law issues will have made little or no difference to investors wishing to sue a sovereign in default, although this may not have been foreseeable at the early stages of the debate. If trust structures become more commonplace in the US, as championed by the International Primary Market Association (Gelpern, 2003b), the differences will be even smaller.

One may ask whether the right to individual enforcement action against a defaulting sovereign is actually in the interest of creditors as a group, as opposed to being beneficial only for the claimant and detrimental to all others. In a sense, this is a question also about economic efficiency, for if the answer is that individual action is not in the interest of creditors, it is unlikely to benefit any other concerned party, and could therefore be considered to be inefficient.

The desirability of majority enforcement provisions and in particular of limited access to legal remedies depends very much on the view one takes of sovereign default. At one extreme, default may be understood as a situation in which the debtor simply cannot raise enough finance to service its debts. The sum available for distribution is fixed so that credit enforcement is at best a zero-sum game: one creditor's gain is another creditor's loss. From the creditors' perspective, lawsuits do not create value but merely result in costly redistribution. In the absence of sovereign insolvency procedures, there is the danger of a 'race to the courthouse', which benefits few investors at the expense of many. This is of course exactly the view taken by proponents of collective action clauses. If defaults are like this, then the right to individual enforcement is not just worthless to creditors as a group, it is outright harmful.

A zero-sum game may exist between a sovereign's creditors in the widest sense, but it need not exist within each creditor class. If we assume that the negative externality of one bondholder enforcing his claims are borne at least partly by other creditor classes, bondholders in aggregate may gain from the

enforcement. While enforcement remains inefficient at the level of all creditors, individual groups have reason to protect their right to legal action, particularly if they are powerful relative to other groups of creditors.

Most creditors would of course strongly debate the notion that a troubled debtor only has a fixed amount of finance available for debt service. A government almost always has the option to raise taxes or to cut spending so as to increase its debt servicing capacity, up to the limit of what is politically feasible and prudent. Moreover, default may have been the result of squandering the credit, spending it on unproductive uses or simply allowing it to drain away in the debtor's bureaucracy.¹⁵ According to this view, which evidently underpins the reasoning of creditor interest groups, all default is to some extent voluntary and the right to individual legal action is pivotal in maintaining debtor discipline. Moreover, the costs of a creditor going to court are borne not by fellow creditors but by the debtor country's population – who, in a sense, are also creditors but are not represented in the debate in the way that for example bondholders are.¹⁶

The merits of individual legal action also depend on the type of crisis. In the case of a temporary liquidity gap, a lawsuit will almost certainly reduce aggregate value. This is not least because potential new lenders may misread it as a signal of a more severe debt crisis, in which case the country could lose its market access so that the concern becomes self-fulfilling. By contrast, the case for individual action is probably stronger with respect to fundamental debt crises.

To sum up, we have seen that concerns about (presumably U.S.) investors' rights to legal remedies should not be used as an argument in the debate on CACs because these rights depend mainly on the administrative structure of a bond. Moreover, the value of such rights to the creditor community at large is questionable.¹⁷

¹⁵ See the literature on *odious debts*, for example Buchheit *et al* (2007).

¹⁶ See Gelpern and Setser (2004) on the issue of equal treatment of domestic and foreign creditors.

¹⁷ Bedford (2005, p. 104): “[F]rom an efficiency perspective, coordinated litigation may be preferable to bondholders pursuing their claims individually.”

2.4 - Majority action

While collective action clauses do not impact on bondholders' recourse to legal action in principle, they significantly reduce the number of situations in which litigation is feasible. The use of the courts is especially appealing and important to holdout creditors who reject an exchange offer for a bond without CACs. Majority action provisions, by binding all bondholders to a restructuring endorsed by the required majority, preclude that course of action.

Thus another potential reason for investors to distrust collective action clauses is the dislike for being part of the minority upon whom a restructuring can be imposed. Such a situation could be particularly unacceptable to American investors who, at least until 2003, were not typically exposed to majority action. The US Trust Indenture Act of 1939 (TIA) specifies that no bondholder may be forced to cede any claims he has under a bond contract (Liu, 2002). While the TIA applies only to corporate bonds, sovereign bonds governed by the laws of New York until recently did not typically include majority action provisions, although calls to include them date back at least to the Rey Report. Buchheit and Gulati (2002), amongst others, speculate that the traditional lack of majority action provisions in New York law bonds may be due at least in part to American investors' aversion to such clauses.

However, a comparison between restructurings with and without majority action clauses shows that this attitude may be unfounded. As mentioned earlier, bonds requiring unanimous consent for a change of payment terms are usually restructured through exchange offers. The relief afforded to the debtor by an exchange offer is likely to come at a high price in any outcome: If the offer is to achieve a high participation rate, it must be so attractive to the bondholders that it cannot offer much relief to the debtor. Conversely, if the offer is designed to be more favourable to the borrower, participation will be low so that the cost of servicing the large number of remaining old-style bonds is high. Paying off the holdouts in full is unfair to the more cooperative bondholders, but to default on the remaining bonds is to risk litigation and the attachment of assets.

To reduce these costs, exchange offers are often accompanied by so-called exit consents (Buchheit and Gulati, 2000). Exit consents can be used as a strategy by which each investor who accepts the exchange offer must simultaneously vote to change certain non-payment terms of the old bonds, which require only a modest majority even under New York law. These changes in the non-payment terms have the intention of sharply reducing the value of the old-style bonds held by those who resist the exchange offer. Examples include withdrawing the right to individual legal action or changing the terms in such a way that the bond can no longer be traded on the stock exchange, making it almost worthless for the dissident bondholder. Exit consents were used for the first time and in an aggressive fashion in Ecuador's 2000 bond exchange (Chamberlin, 2001). Further examples include Uruguay in 2003 and the Dominican Republic in 2005 (Sturzenegger and Zettelmeyer, 2006a). There is evidence to suggest that such amendments have been highly successful in boosting participation rates, for example, Ecuador achieved 99% in 2000 (Bedford *et al*, 2005).¹⁸

Through the use of exit consents, it may be possible for the debtor to design the terms of an exchange offer such that the participation rate is just above the level required to change the non-payment terms of the bond. If this is achieved, the remaining bondholders will be under strong pressure to also relinquish their bonds before they lose a large part of their asset value. Thus, a considerable degree of coercion exists in restructurings under either regime. The better legal standing enjoyed, and in the past sometimes fiercely defended, by most investors under U.S. law in fact has very little practical value.

2.5 - Fear of abuse

Bondholder representatives have expressed the concern that majority action provisions could be abused by debtors who, either directly or through entities under their ownership or control, buy back a sufficient share of a particular issue to vote for a restructuring that runs squarely against the interest of the remaining bondholders. However, Liu (2002, p. 6) already stated that "some sovereign bonds specifically

¹⁸ According to Garcia-Hamilton *et al* (2005), the participation rate was somewhat lower at 97%.

exclude the bonds held by or for the benefit of the issuer for quorum and voting purposes". Similar disenfranchisement provisions were contained in the Model Clauses proposed by the "gang of six" trade associations and have since been a general feature of the wave of issues with CACs under New York law.

It could be argued that the exclusion of certain bonds from voting can be ineffective if the debtor is in a position to abuse majority action provisions through informal influence:

Domestic investors may hold a large portion of the principal of a specific issue with collective action provisions, either as a result of secondary market trading or heavy domestic participation in the primary market. Such investors, while not under the legal control of the debtor, may nevertheless be subject to moral suasion. This creates a risk that debtors may be able to engineer support for a restructuring which is not supported by a majority of non-resident investors. IMF (2002a, pp. 11)

Granted, no refinement of collective action provisions can completely rule out abuse, but then scope for opportunistic behaviour on the part of the debtor exists also under unanimous consent clauses. Moreover, to say that a debtor will jump at the chance to exploit bondholders as soon as debt contracts change is again to underestimate the disciplinary effects of reputational considerations. The benefits for a sovereign of rigging a restructuring to the detriment of the minority are limited to one bond issue at a time. By contrast, the reputational consequences for the sovereign extend not only to that issue, and not only to all classes of credit, but most likely to all its external economic relations. Abuse is not worthwhile unless a debtor has an unrealistically high discount rate and a very unusual debt structure.

2.6 - Voting thresholds and investor surplus

The publication of EMCA's 'Model Covenants for New Sovereign Debt Issues' in 2002 indicated that investor representatives no longer refused to accept CACs as such, but that they objected to the standard voting threshold of 75%. For example, the 'Covenants' required a 95% majority to amend payment terms, which, in the view of the IMF (2002a, p. 14) "may effectively defeat the purpose of the majority

restructuring provision.” To justify such high thresholds, creditors have cited fear of abuse of the type mentioned above, as well as more general concerns of opportunistic behaviour on the part of the debtor due to increased moral hazard. Moreover, they claim, CACs can be effective even with very strict voting requirements because “some experience suggests that no more than 2 to 3% of any debtor country’s bonds have been held by free-rider creditors that refused to participate in a restructuring” (Chamberlin, 2002a, p. 5). “If the perceived size of the potential hold-out problem in any specific debtor country is 2-3%, there does not seem to be any justification for collective action clauses that operate with any percentage less than 90-95%. Clauses with lesser percentages would, in effect, seriously intrude on the legitimate rights of creditors not to be bound to changes in debt payment terms made against their will.”¹⁹

While, as discussed above, such arguments are partly unfounded, there is a more immediate reason for investors to insist on unanimous consent, or at least on very high voting requirements as a second best outcome if the first best is no longer politically feasible. Informally speaking, the higher the voting threshold, the more bargaining power rests with creditors, and therefore the better is the offer that creditors can expect to receive in a restructuring. This point can be made slightly more formally using the graphic model below.²⁰

Assume the following simple setting: A sovereign debtor encounters financial troubles and decides to make use of the collective action clauses contained in its bonds by proposing a set of amendments to the bond terms. In figure 4, the horizontal axis measures the proportion of bonds in a particular issue whose holders will support the restructuring offer. The vertical axis measures the bondholders’ valuation of the bonds with the existing terms, relative to the proposed post-restructuring terms. Seen from the borrower’s

¹⁹ Chamberlin (2002b, p. 6). While the extremely high voting thresholds envisaged by the trade associations were not adopted by the market, the thresholds that eventually materialised in the first issues under New York law could be characterised as a compromise between Chamberlin’s position and the traditional voting levels under English law, which “generally range from two-thirds to three-fourths” (Liu, 2002). Most bonds issued in 2003/2004 carried a voting requirement for changing the financial terms of 75%; Brazil, Belize, Guatemala and Venezuela specified 85% (Drage and Hovagimian, 2004). Haldane *et al* (2005) model the factors that may lead debtor countries to choose different threshold levels.

²⁰ This discussion is about the voting threshold *investors* would optimally choose. For a model that explores the *debtor’s* optimal voting threshold, see Haldane *et al* (2005); Ghosal and Thampanishvong (2007).

perspective, it denotes the bribe that can buy sufficient votes to achieve a given required majority threshold to reach a restructuring agreement.

Bondholders are ranked along the supply schedule S_1 according to their relative valuation of the old and new bond terms. At the bottom end of S_1 , we find those investors who are most enthusiastic about the new terms, or most pessimistic about the repayment prospects of the existing bonds. They would be willing to pay for the right to participate in a restructuring, or, in other words, to receive a negative bribe. For very high rates of consent, even the most reluctant bondholders would have to be persuaded – or bribed – to tender their votes. That includes investors who hope for a positive economic shock and subsequent full repayment, or who intend to satisfy their claims through legal means. Since it is not possible to distinguish between individual bondholders with their varying degrees of willingness to agree to the proposed restructuring, every bondholder must be paid the bribe that is necessary to buy the most expensive vote.

Valuation of pre-restructuring relative to post-restructuring bond terms

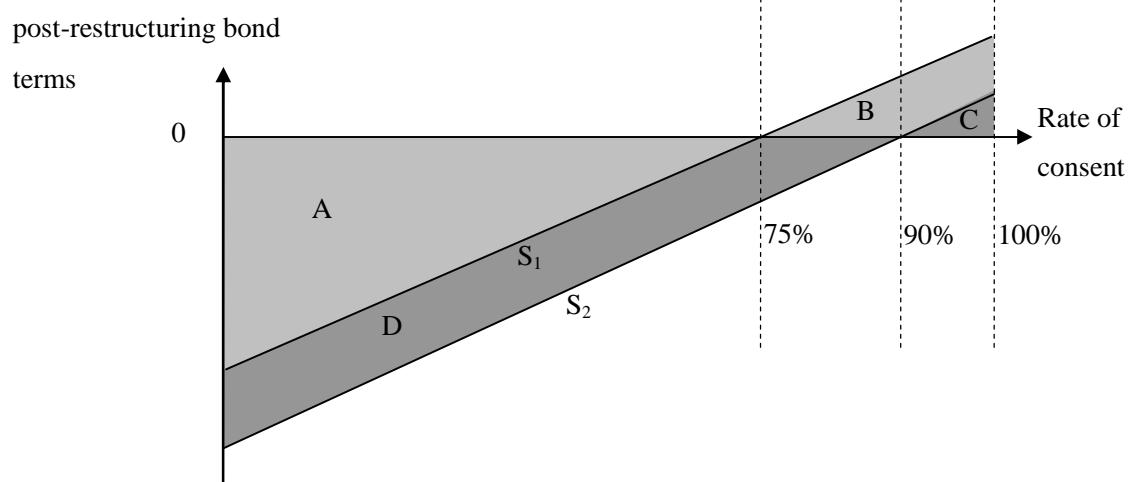


Figure 4 – Voting thresholds and investor surplus

The upward sloping supply of votes is intuitively appealing but inconsistent with standard financial market theory: In a perfect market, differences in expectations would disappear as optimistic investors buy up the claims of the more pessimistic ones. It is reasonable to assume that this will not happen in the present situation for two reasons: First, the pessimistic bondholders hope that the restructuring offer will fail and therefore do not offer their bonds to the optimists or to outside investors. Second, it is not unrealistic to think that none of the optimists are prepared to have so large a holding of this high risk debt as to buy out all of the pessimists, not least because this strategy would only pay off in the uncertain case that the restructuring goes through.

Because no bribes can be paid in an actual restructuring, the supply schedule must intersect the horizontal axis at or to the right of the required majority level. The sovereign will try to make an offer that is only just attractive enough to achieve the required threshold. To achieve 75% majority, the sovereign will propose a set of bond terms that give rise to S_1 . This leaves all bondholders up to the 75% level with a surplus – they can expect to receive a revised bond contract which they consider to be more valuable than the one they currently hold. Those beyond 75%, when bound by the restructuring agreement, will suffer a perceived reduction of wealth. Thus the ‘investor surplus’ under S_1 equals the area A-(B+C). A higher voting threshold, say 90%, requires a better offer from the borrower. When the proposed terms are more attractive to the bondholders, any given level of support for the offer can be achieved with lower bribes, so the supply schedule shifts downwards to S_2 . Investor surplus is now A+D-C. Moving the voting threshold from 75% to 90% increases investor surplus by B+D. Thus it is evident that investors have a strong incentive to lobby for high voting thresholds.

2.7 - Adjusting yields

The initial rejection of CACs by some investors is puzzling for another, very basic reason: The more widespread use of the clauses could not be expected to have any influence on the wealth or income of bondholders. Bondholders cannot be forced to exchange their existing bonds with unanimous consent

clauses for ones with collective action clauses, and the value of their existing bonds is unlikely to be affected by the advance of CACs.

If the majority of investors perceived the added risk of bonds with CACs as outweighing the benefits, efficient markets would ensure that their yields rise until the marginal investor becomes again indifferent between the two types of bonds. Those investors who do not feel adequately compensated by the higher yields can choose from an almost infinite number of assets with similar characteristics as substitutes for their bonds.

Therefore any welfare analysis of CACs can safely ignore the effects on bondholders, except for one consideration. The attitude of investors matters in the respect that their hesitation to accept CACs could lead to higher borrowing costs and / or a reduced supply of loanable funds for emerging market borrowers, to whom alternative sources of finance are not easily available. However, the evidence presented in the next section shows that this is not the case.

2.8 - Summary

This section has sought to evaluate some of the main concerns investors have cited as a reason for their reluctance to embrace the more wide-spread use of collective action clauses. It has been illustrated that most of these concerns are at best only partly founded:

CACs may or may not increase moral hazard; majority action and majority enforcement clauses were feared to preclude rights which many investors do not have in the first place or which have very little value; and the ability of borrowers to abuse CACs has been significantly reduced by the voting procedures specified in recent bond issues. Investors' preference for high voting thresholds is understandable, but not for the reasons they provide, as the model of investor surplus shows. Finally, it seems likely that CACs do not materially affect bondholder wealth anyway.

Before we try to account for the deficiencies in investors' arguments in the conclusion, the next section examines whether bondholders 'put their money where their mouth is', i.e. whether their alleged

hostility towards CACs is reflected in bond yields. If that were the case, we would expect bonds with CACs to carry higher yields, so that investors are compensated for the added risk of such bonds.

3 – Bond Yields

3.1 - Methodology

Since 1999 a number of authors have sought to establish empirically whether the presence of CACs has an impact on sovereign bond yields. The most obvious way to do this is to compare the yields of bonds that typically include the clauses (i.e. mainly those governed by English law) to those that do not (New York (until 2003) and German law). The basic methodology of the regressions is usually very similar. The dependent variable consists of the yield spreads (relative to a riskless security of the same maturity) of a large sample of bonds, taken either from the primary market over a period of time or from the secondary market at a specific date. Arguments have been put forward as to why data from either type of market is superior to the other, but the results do not differ systematically.

The explanatory variables usually comprise a set of borrower-specific (such as credit ratings) and bond-specific (such as time to maturity, currency, issue size) characteristics of an issue as controls. The independent variable of interest, namely whether or not a bond features CACs, is often proxied by the governing law of the bond, for example it might be a dummy variable coded “1” if the bond is governed by laws which allow CACs, and “0” otherwise.

This section presents the methodology and results of the five major empirical studies on collective action clauses and sovereign bond yields in chronological order.²¹ It discusses the implications of these results on the debate on CACs and concludes with two other types of evidence of investor sentiment.

²¹ Two widely-cited studies are not discussed here for methodological reasons: Dixon and Wall (2000), and Petas and Rahman (1999). Both papers list a small number of cases in which a borrower issued a pair of bonds with similar characteristics, except that only one of the bonds includes collective action clauses. This is a simple but informative method of isolating the effect of

3.2 - Tsatsaronis (1999)

Tsatsaronis (1999) conducted the first systematic investigation into the yield effects of CACs. His primary market sample includes 263 international sovereign bonds issued between 1990 and 1999 whose principal exceeds \$ 300m. Dummy variables for New York, English and German law are used as “rough, but informative, proxies” for the presence of collective action clauses.

The results show that the yields of New York law bonds are lower at the 10% significance level, whereas English law bonds, which include CACs, have higher spreads; however the latter coefficient is not significant. The author emphasises that the importance of the results should not be overestimated for two reasons. Firstly, a Wald test for the difference between the English and New York governing law coefficients fails to reject the null hypothesis at the 5% level. Secondly, the significance of the New York law variable disappears in alternative specifications of the model.

Tsatsaronis concludes by pointing to the possibility that the debate on CACs may sharpen investors' focus on such clauses, so that clearer differences in the trading performance under different governing laws may yet arise. However, as we will see, this is not the case. Subsequent, more elaborate studies have tended to confirm these initial results.

3.3 - Eichengreen and Mody (2000)

Eichengreen and Mody construct a primary market sample of more than 2.000 international corporate and sovereign bonds issued between 1991 and 1999. The methodology is somewhat more sophisticated than that of Tsatsaronis (1999). Because of likely endogeneity problems involving the choice of governing law, they use an instrumental variables approach. First, the authors estimate an equation predicting the choice of governing law (New York, English, or other), then the predicted values from that regression, rather than the actual values, are used as the proxy for the presence of CACs in the yield equation.

CACs on bond yields. Both papers find no noticeable effects. We do not present the results in detail because they do not lend themselves to statistical tests.

Additionally, because yields are only observed when an issue is actually made, the authors estimate a sample selection model.

The simplest version of the regression delivers a coefficient on the English law variable which is negative but not significantly different from zero. The main innovation of the paper is introduced in subsequent specifications of the model: Borrowers are distinguished according to their credit rating. This is achieved through the interaction of the rating and governing law variables. According to the results, when issuing under English governing law, a high-rated borrower can expect to pay significantly lower yields compared to governing laws which do not entail the use of CACs. Conversely, the market will demand a significant yield premium from a low-rated borrower for its use of the clauses. These effects have the same sign but are less pronounced when the sample is restricted to sovereign bonds only.

By way of explanation, the authors hypothesise that when the likelihood of default is low, the market tends to reward the benefits of faster restructuring afforded by CACs, while investors do not believe that such borrowers will be tempted by the relative ease of opportunistic defaults under CACs. By contrast, CACs are perceived as causing severe problems of moral hazard for low-rated borrowers, whereas the benefits of faster restructuring are relatively smaller.

Intuitively appealing as this reasoning may seem, it implies a very particular assumption about the way in which the costs (greater risk of opportunistic default) and benefits (faster restructuring, reduced loss of output and asset value) depend on the probability of default or credit rating.

As depicted in figure 5, both costs and benefits of CACs undisputedly increase as default becomes more likely. However, for Eichengreen and Mody's explanation to hold, the costs must rise more rapidly than the benefits, so that low-risk borrowers are rewarded for the use of CACs whereas high-risk borrowers are punished. While this is indeed a convenient explanation for the empirical findings of the paper, there is no *a priori* reason to think that costs and benefits should vary with default risk in this fashion; the reverse seems just as plausible.²²

²² The authors subsequently provide the missing theoretical underpinning in Eichengreen *et al* (2003), see below.

Costs / Benefits of CACs

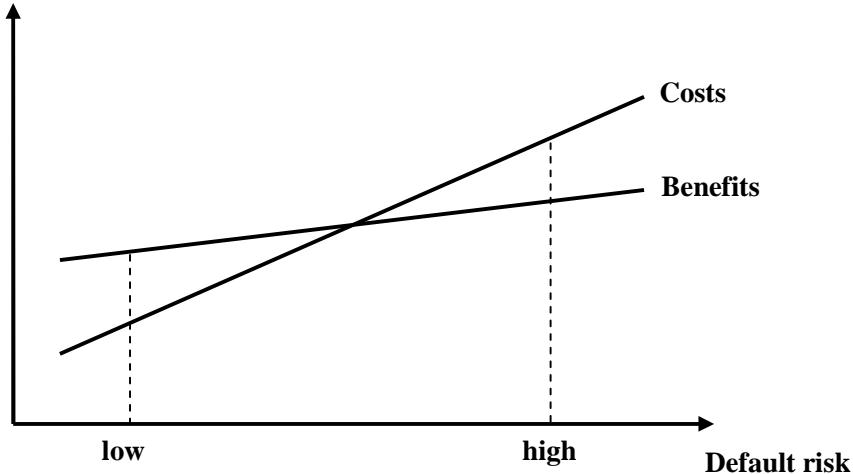


Figure 5: Costs and benefits of CACs as implied by Eichengreen and Mody (2000)

A second point of criticism relates to Eichengreen and Mody's estimates of the quantitative effects of using CACs. According to their results, a low-rated sovereign borrower can expect to pay a premium of as much as 130 basis points on its bonds with CACs. A high-rated borrower is predicted to achieve a discount of 53 basis points. Many commentators have criticised these figures as being unrealistically large, both on the grounds of new empirical evidence and common sense – a yield difference of this size would create market outcomes vastly different from the ones we actually observe: No high-risk borrower would issue with CACs at such costs.

3.4 - Becker, Richards, and Thaicharoen (2001)

Becker *et al* (2001) are the first to use *secondary* market corporate and sovereign bonds to estimate the yield effects of CACs. The authors collected two samples, one from June 1998 and one from June 2000. The advantages over primary market data are at least threefold. First, secondary market data enable the researchers to evaluate the effects of major events on market sentiment by sampling data from before and

after the event. Second, fewer control variables are necessary because there is no need to take account of general market conditions changing over time. Finally, problems of endogeneity are arguably less prominent in secondary market data. Nevertheless, Becker *et al* also analyse some primary market data so as to allow comparisons to earlier studies. In particular, they claim that their methodology represents a substantial improvement over the one used in Eichengreen and Mody (2000), due to higher data quality, better regression specifications and endogeneity adjustments, and additional control variables.

In the secondary market data from June 1998, Becker *et al* find that bonds governed by English law carry significantly lower yields than those governed by other laws. When a distinction is made according to the borrowers' rating (note that the cut-off here is different from the one used by Eichengreen and Mody), the regression yields significantly negative effects of the use of English law for high-rated borrowers and no effects for low-rated borrowers – partly in line with Eichengreen and Mody's results.

The subsequent series of payment crises of Russia, Pakistan, Ukraine and Ecuador lead the authors to suspect that the market's perception of the possibility of default (and thus of CACs) may have changed in consequence; and the second sample from June 2000 was collected to test for this. In fact, the negative overall yield effect of CACs disappears between 1998 and 2000, possibly indicating that the market began to look less favourably towards CACs. Again splitting the sample according to credit rating, Becker *et al* find that in June 2000, high-rated borrowers paid a significant yield premium while less creditworthy borrowers were granted a significant discount – almost exactly the opposite of Eichengreen and Mody's results and also completely different from what the data revealed two years previously. As before, the size of the coefficients declines in more sophisticated specifications and signs even change, leading the authors to think that the strong correlations were largely spurious. As a final secondary market data exercise, the authors pool the 1998 and 2000 samples. The resulting coefficient on English governing law is negative but “nowhere near significance”.

The primary market sample used by Becker *et al* covers bonds issued between January 1991 and September 2000, and is thus quite similar to the samples used by Eichengreen and Mody, and by Tsatsaronis. But unlike the former, Becker *et al* do not find that high- and low-rated borrowers fare

differently when issuing with CACs. The overall coefficient on English governing law is significantly negative (suggesting that investors value CACs), but the coefficient on German law is even more strongly negative (suggesting that they do not). To make matters worse, bonds issued under the laws of Luxembourg, which like those issued under English law contain CACs, pay a significant premium. Alternative specifications always yield a negative coefficient on English law, though it is not always significant. Thus, the primary market data do not allow Becker *et al* to draw any of the clear-cut conclusions found in Eichengreen and Mody.

To sum up, the three data sets examined by Becker *et al* indicate that investors seem to have a positive view of CACs, though this result is not persistent. Secondly, there is no evidence that low-rated borrowers are systematically penalised for using CACs, as found by Eichengreen and Mody. Moreover, Becker *et al* reject the large quantitative effects found by Eichengreen and Mody and attribute the size of the effects to the use of the instrumental variables correction for endogeneity, which, arguably, did not exist in the first place.

3.5 - Gugiaatti and Richards (2003)

Gugiaatti and Richards' (2003) work adds to the empirical assessment of the market's appraisal of collective action clauses. Following closely the methodology of Becker *et al* (2001), the authors collect secondary market data as of January 31st, 2003, in order to provide an update to the earlier results following the “extensive debate” on CACs during the year 2002.

The results are easily summarised. A negative coefficient for English law bonds is the only statistically significant outcome. However even this significance disappears when the standard interaction between rating and governing law is introduced. Contrary to Becker *et al* and Eichengreen and Mody, there is no evidence of a difference between the yields of high- and low-rated borrowers when using CACs. Neither does correcting for endogeneity through fixed effects yield any noteworthy results. The authors conclude that “[t]his pattern of variable, but almost always insignificant, estimates is exactly what one would expect if CACs have no impact on yields” (p. 20).

Yet, Gugiaatti and Richards' contribution is important in that this study is the first to recognise, and to take account of, the fact that the match between governing law and use or non-use of collective action clauses was less than perfect even before 2003. We return to this point below.

3.6 - Eichengreen, Kletzer, and Mody (2003)

The paper by Eichengreen *et al* (2003) is currently one of the latest, and perhaps most substantial contributions to the empirical debate on the yield effects of CACs. Besides some new empirical evidence, it contains a theoretical model of bond renegotiations which provides the background to the earlier findings of Eichengreen and Mody (2000), according to which low-rated borrowers are penalised for the use of CACs, whereas high-rated borrowers receive a yield discount. However, the explanation derived from the model is not entirely convincing. The model predicts that the cost of using CACs depends on the degree of moral hazard, i.e. on a borrower's amount of private information, rather than its credit rating, although credit quality and moral hazard are admittedly related.

The empirical part of the paper is motivated by the mixed results of previous research, in particular by the many insignificant regression coefficients in Gugiaatti and Richards (2003). By repeating Gugiaatti and Richard's sampling of secondary market data at four additional points in time, Eichengreen *et al* hope to obtain more robust coefficients. Moreover, the resulting pooled sample allows them to test more rigorously an earlier finding by Mody, suggesting that the point on the credit rating scale at which the use of CACs has no impact on yields shifts over time, depending on investors' sentiments towards emerging market debt as proxied by the Emerging Markets Bond Index (EMBI). Thus, the data is gathered for four dates (in addition to the date used in Gugiaatti and Richards) at which the EMBI spread was either very high or very low, so as to capture the effects of changing market sentiment.

Random effects estimation yields a coefficient on the interaction between rating and use of CACs which is significant at the 90% level, i.e., the yield penalty for low-rated borrowers increases when using CACs, although the effect is again not very strong. The next step in the analysis is to introduce a triple interaction term, between the use of CACs, credit rating and EMBI spreads. The obtained positive

coefficient suggests that when investor sentiment towards emerging market debt is negative, the point at which using CACs has no impact on spreads occurs relatively high up on the credit rating scale. In other words, when market sentiment is poor, all but the most highly-rated borrowers are penalised for the use of CACs; conversely, when investors are enthusiastic about emerging markets, the use of CACs reduces spreads for all but the least creditworthy borrowers.

Eichengreen *et al* consider these findings important because they “go some way toward reconciling previous studies of the primary market. Recall that some of those studies found that speculative borrowers face higher funding costs when using collective action clauses (Eichengreen and Mody, 2000a,b) but another (Becker, Richards, and Thaicharoen 2001) did not” (p. 24). Two aspects of this interpretation merit further thought. Firstly, it seems odd that the authors see the potential to reconcile results from the primary, rather than the secondary market. After all, the primary market samples of the two studies mentioned in the quote have an overlap of around 90%, so that the influence of changing market sentiment is minimal. Secondly, it is true that the “triple interaction effect” could explain why at times speculative grade borrowers are penalised for the use of CACs while at others they are not. However, the studies mentioned do not actually contain predictions of that sort. They merely highlight the (lack of) difference that the use of CACs makes to high- and low-rated borrowers. While market sentiment (as found by Eichengreen *et al*) may shift the point at which the effect of credit quality reverses sign and thus determines whether a yield premium exists for poor credits, it does not affect the magnitude of the effect of rating upon the yield effects of using CACs. Therefore reconciliation of the sort proposed here is not possible, not to mention that the triple interaction effect is barely significant in the Eichengreen *et al* data and the history of yield studies shows that such a promising result rarely survives the next paper.

3.7 - Summary and implications for the debate

Bonds with collective action clauses do not generally carry higher yields than those without these provisions. The latest evidence in this vein is presented in a primary market study by Bradley *et al* (2008). The only result which runs contrary to this general conclusion is that of Tsatsaronis (1999), the study with

the smallest sample and the lowest degree of econometric sophistication. All subsequent papers found negative and often significant yield effects of CACs. Some studies have found that, given that a country has a poor credit rating, issuing with CACs will increase its borrowing costs. It must be stressed though that this does not necessarily imply that low-rated issuers will be deterred from the use of CACs, as has been suggested, for example by Eichengreen and Mody (2000). If the overall negative yield effect of CACs is sufficiently strong to offset the rating effect, even a low-rated borrower may still be better off issuing with CACs than issuing without.

It is evident from this survey of the empirical literature that bond yields provide no evidence that investors dislike holding bonds which contain collective action clauses. This was true even in the years prior to 2002 when the resistance to CACs was at its strongest. At this level of analysis then, the bondholders' rhetoric against the clauses, which is at the very least a historical fact, remains a puzzle to which we will return in the concluding section.

Before we turn to the other side of the market though, it is worth mentioning a particularly interesting study and some more general observations which caution against taking investor opposition at face value.

3.8 - Richards and Gugiaatti (2004)

Richards and Gugiaatti (2004) examine the actual contractual terms of emerging market sovereign bonds in the Euromarket in unprecedented detail and arrive at two related findings which question the very basis of investor opposition to CACs and of the empirical literature on yield effects in general. The authors identify almost \$ 12 billion of bonds issued between 1991 and 2003 that are governed by the laws of New York but contain CACs.²³

With respect to the yield studies this implies that governing law is a much less suitable proxy for the presence of CACs than was generally assumed. Thus all empirical studies to date have wrongly classified

²³ Some of these were private placements that were not registered with the SEC, though, so it is perhaps not too surprising that they were previously overlooked.

a number of bonds as not containing CACs while in truth they did, although Richards and Gugiaatti (2003) and Eichengreen *et al* (2003) adjusted their data on governing law for the cases that were known at the time. It is unclear to what extent the results of the literature were affected by this mistake.

On the other hand, the finding shows that even before 2003, most emerging market borrowers had already issued bonds with CACs and that many US investors held those bonds. The example of American investment in Russia shows that bonds with CACs were part of the portfolios of those investors who were fighting against the ‘erosion of creditor rights’, perhaps unaware that New York governing law was never the kind of sanctuary from majority action they said it was.

Looking for a reason for the unusual pattern of New York law bond issues with CACs, Richards and Gugiaatti (2004) discover that in each case, the legal advisor to the investment bank managing the issue was the London office of a New York based law firm. The authors speculate that the advisors simply used English style bond contracts from previous issues and merely changed the governing law provisions to New York to suit the preferences of US institutional investors. Correspondence with the law firms revealed that in many cases the partners were not aware that they had created an unusual combination of governing law and CACs.

The question arises, if the issuers, underwriters and legal advisors are sometimes unaware that CACs have been used, how can bondholders know the exact legal details of their securities? Gugiaatti and Richards convincingly argue that it is in fact extremely difficult to ascertain the exact terms of an existing bond contract. With respect to new issues, they quote the Secretary-General of the International Primary Market Association (IPMA) as saying that “[t]here is no mechanism at present for an investor [...] to know at the time she is invited to an issue whether the issue has CACs...” (p. 2). In many cases, at that stage the legal details, including governing law, will not even have been agreed between the issuer and the underwriter. Accordingly, of the market participants interviewed by Gelpern and Gulati (2007, p. 10), “not one investor reported reading the underlying contracts.”

Although Gugiaatti and Richards regard this fact as supporting the empirical studies that find no yield effects of CACs, it can also be used for strong criticism of the general literature on yields. If investors are

indeed often ignorant about which type of bonds they hold, particularly in the primary market, then any yield effects found must be spurious, and models of the choice of governing law, as contained in almost all empirical papers, are superfluous.²⁴ Furthermore, the setup described here is grossly inconsistent with investors, or any market participant for that matter, caring deeply about the presence or absence of CACs. If CACs mattered as much as some statements from creditor spokesmen would have us believe, surely investors would demand for information about the clauses to be more accessible.

To sum up, the paper by Gugiaatti and Richards (2004) can be interpreted as a serious criticism of the empirical literature on CACs,²⁵ and it further damages the credibility of those bondholders who were strongly opposed to the clauses. If, on the other hand, the evidence presented in the paper were incorrect, a wave of protest should have come from the academics and practitioners whose research and views it contradicts.

3.9 - Other evidence of investor indifference

Even prior to 2003, almost half of all international sovereign bonds had collective action clauses and their holders showed no sign of dissatisfaction. There is no comprehensive data on which groups of investors hold which types of bonds, yet it may be assumed that the portfolios of American investors are biased towards bonds governed by New York law, be this the result of preference, habit, or listing requirements (Buchheit and Gulati, 2002). However, American bondholders do also invest in English law bonds, such as those issued by Russia, Ukraine and Pakistan (IMF, 2002a). Moreover, Gugiaatti and Richards (2004) have demonstrated that a substantial amount of New York law bonds included CACs even prior to 2003.

²⁴ It is of course possible that investors make an informed guess about whether a given bond includes CACs and build their evaluation of the bond upon that guess. Yet a guess could not be the basis of a large difference in yields.

²⁵ Another important point of criticism is that these papers appear to assume that the presence or absence of CACs is the only factor relevant for yields which differs across governing laws. This seems unlikely. For example, English law bonds tend to use trust deeds, which are said to be more expensive than alternative mechanisms (Liu, 2002) and are not commonly used under other governing laws. Furthermore, Choi and Gulati (2004) have found large amounts of variation with respect to the ease of restructuring within contracts of the same governing law.

It is unlikely that investors who hold bonds with CACs differ markedly in their risk preferences from those who hold bonds with unanimous consent clauses (assuming for the sake of the argument that they even know which type they possess). Moreover, presumably a sizable number of investors hold both types of bonds, e.g. through mutual funds, which is again inconsistent with any strong views on CACs.

Finally, there is anecdotal evidence that the market pays very little attention to CACs when pricing bonds.

The sell side research of investment banks appears never to refer to CACs as explaining why yields on particular bonds deviate from their fair-value yield curve. The several news services that report in detail on new issues appear never to explain the pricing of a new bond in terms of the presence or absence of CACs ... Bond ratings from rating agencies do not differ based on governing law - agencies appear never even to consider governing law as a risk factor.

Becker et al (2001, p. 26)

Thus, the vast majority of investors never seemed to share the view that they might be worse off when collective action clauses become more commonplace. In other words, the resistance to CACs described above was both unfounded and unrepresentative of the attitude of most bondholders. In Gelpern and Gulati's (2007, p. 58) interviews with market participants, "many said ... that EMCA activists represented a small fringe of the investor community."

4 – Sovereign Borrowers

4.1 - Introduction

It is the sovereign borrowers who ultimately decide whether to include collective action clauses in a new bond issue; therefore their incentives to do so merit some investigation when trying to explain the time lag between the first official calls for increased use of CACs and the change of market practice in 2003. Exactly because borrowers are free to issue without CACs, they were never compelled to voice their

reservations, whereas investors had to resort to public threats if they wanted to stop the advancement of the clauses. Thus, what we know about the reasons for the emerging market borrowers' hesitation to embrace the clauses is often based on hearsay and speculation, rather than on direct statements from borrower representatives.²⁶

This section examines the reasons for borrowers to delay the adoption of CACs in New York law bonds in much the same fashion as section 2 scrutinised the position of investors. The fact that a growing number of sovereigns have now issued with CACs under New York law suggests that the initial reservations about CACs have finally disappeared. Nevertheless, a discussion of the borrowers' arguments with hindsight has some merit. By clearing up the debate, it may help to stimulate a more rapid change in market practice if and when the adoption of CACs under German governing law, too, comes onto the policy agenda.

4.2 - Benefits of CACs to borrowers

Sovereign borrowers benefit at least as much as investors do from smooth and speedy debt restructurings, which can be facilitated by collective action clauses. Again, the benefits attributed to CACs depend on the view one takes on sovereign debt restructurings. Critics have argued that orderly restructurings are also possible by way of unilateral exchange offers, perhaps using exit consents, and have denied that there is a serious collective action problem (EMTA et al, 2002).

Yet, drawn-out restructurings and outright defaults do occur, and it is undisputed that the sovereign borrowers usually suffer enormously. The costs of default to a sovereign borrower are well documented. An overview of the literature by the Inter-American Development Bank (IADB, 2006, chapter 12) identifies five sources of costs: Loss of reputation (resulting in higher interest rates and ultimately loss of

²⁶ More generally, the number of references to investor opposition in the literature exceeds the number of available statements from market participants to that effect. There is almost a sense that nobody wanted CACs but also nobody wanted to be perceived as blocking their advance. "Issuers pointed to the bankers, bankers pointed to the issuers, everyone pointed to the investors." (Gelpern and Gulati, 2007, p. 40)

market access), direct sanctions (attachment of property or trade sanctions), damage done to the domestic financial sector, political costs, and effects on economic growth. With respect to growth, the IADB highlights the co-occurrence of defaults and recessions, but cautions that the direction of causality is not clear. Other research shows that investment tends to suffer due to a shortage of credit from domestic and foreign sources (White, 2002; Arteta and Hale, 2005). Eichengreen and Mody (2000) state that extended debt negotiations depress growth. White (2002) explains how a debt crisis can turn into an economic one.

Evidently, borrowers have good reasons to avoid defaulting on their debt. Since collective action clauses bear at least the promise to help resolve an emerging crisis before default actually occurs, it remains to be explained why borrowers did not adopt them in their New York law bond issues more readily. Furthermore, CACs could make for better investor relations. Restructuring negotiations with CACs should be much more consultative in nature, and some of the clauses that were implemented recently provide for extensive rights to information for the bondholders. Investors may also find that restructuring through majority amendment is more equitable since every bondholder is left with the same claim. By contrast, an exchange offer with less than full participation will often result in preferential treatment for the holdout creditors – either because the borrower voluntarily satisfies their original claims or because it is forced to do so under the threat of litigation. Restructurings done through the use of CACs should appeal to borrowers because they are the ‘cleaner’ solution, inasmuch as there will be no remaining outstanding bonds on pre-restructuring terms, as is often the case following an exchange offer. The country that moved first to adopt CACs could also expect to benefit by creating substantial goodwill with the public sector institutions (Gelpern and Gulati, 2007).

Two other important benefits to the issuer should be mentioned. First, reversing the ‘investor surplus’ analysis of section 2 suggests that restructuring agreements reached under CACs should be more favourable for borrowers than those reached through bond exchanges. A successful bond exchange probably requires a rate of participation that is higher than the required voting threshold of the clauses. The terms of the restructuring therefore have to be more attractive to investors and, by implication, less

attractive to the sovereign. Being easier to restructure, bonds with CACs create a stronger bargaining position for the borrower and thus better expected outcomes.

Second, it is important to realize that CACs bring the possibility, but not the obligation, to restructure the existing bonds. The sovereign is free to ignore the option to negotiate with the bondholders and instead opt for an exchange offer, which has in fact happened in practice (see Dixon and Wall, 2000, for the case of Pakistan). CACs enable an additional course of action without precluding any of the solutions that were previously possible.²⁷ The value of this option is by definition non-negative. As for the costs, we will argue below that they are probably much smaller than has sometimes been maintained.

4.3 - Borrowing costs

In early 2000, Barry Eichengreen and Ashoka Mody asked, “Would Collective Action Clauses Raise Borrowing Costs?” Not least since then had concerns about higher borrowing costs become the most widely-cited explanation of the borrowers’ hesitation to adopt CACs. The sovereigns were afraid, so it was generally assumed, that bonds with super-majority provisions would be less attractive to investors, particularly in the U.S. market. Investors were feared to demand higher yields to compensate them for the added risk of CACs. According to Boorman (2003), some creditor representatives used the opportunity to reinforce the borrowers’ concerns: “[T]he private sector seems to be going around to emerging market countries and trying to scare the hell out of them about the fact that either the use of collective action clauses or the SDRM will lead to an increase in spreads...”

Whatever the source of the concerns, the detailed review of the empirical literature above has shown that higher borrowing costs are a myth. Not only is there no evidence of a systematic yield premium after five years of research, but there was also never a point in time since the first study by Tsatsaronis (1999) at which the available research unambiguously predicted higher yields. Several studies have even

²⁷ That may be disputed. We return to the question of whether CACs preclude any courses of action in the last section.

suggested that sovereigns of high credit quality could actually reduce their borrowing costs by issuing bonds with CACs.

Yet, it seems that no amount of academic research could fully dissolve the concerns of the borrowers. The main value of the studies appears to have been to provide rhetorical support for officials who needed to invalidate the private sector's arguments. Gelpern and Gulati (2007) quote a U.S. government representative in this respect: "We always cited Barry [Eichengreen]'s work ... to neutralize the bad stuff they were hearing ... If I were [an emerging markets debt manager], I would still be awfully worried." An interviewee from the buy-side expresses his low esteem for the empirical work in the following way: "Academic studies on pricing were useless as they always are ... The data sets they use would make [a quantitative analyst] cringe" (Gelpern and Gulati, 2007, p. 47).

But even if the empirical evidence did not have much sway with them, borrowers ought to have been aware of all those arguments against higher yields which were mentioned before in the context of investors: the large stock of bonds outstanding with CACs under English law; the disregard of CACs by rating agencies, the apparent ignorance of many investors, etc.

Perhaps the strongest indication that sovereigns need not concern themselves with borrowing costs when deciding about CACs comes from the inconsistent market practice. In a sample studied by Gugliatti and Richards (2003, pp. 6), "17 of the 20 most active borrowers have switched between issuing bonds with and without CACs. [...] If] the presence or absence of CACs were a major influence on borrowing costs, we would expect borrowers to decide which type of contractual form provided the cheapest (or otherwise most appropriate) form of financing for them, and then to always use those contractual terms." Thus, the argument of borrowing costs was never very convincing.

4.4 - First mover problems

The IMF (2002a, pp. 10), amongst others, suspected that there could have been a first mover problem associated with the adoption of CAC in markets where their use was not customary: "There is a general perception that the costs of change are likely to be borne most heavily by the first issuers to include

collective action clauses in their New York and German law bonds [...] Strong incentives might be needed to overcome the first mover problem.” These costs were thought to comprise higher borrowing costs, additional marketing expenses, and the costs of changing standard bond documentation. Once the first move had been made, subsequent issues under New York law with CACs would face a more favourable market so that the benefits of issuing with CACs might outweigh the costs. The tragedy of this collective action problem is, of course, that in theory the first move is never made. Moving first would create positive externalities for the subsequent movers. The impossibility of internalising these benefits results in a market failure, such that an innovation which would yield a positive net expected value for borrowers as a group is not undertaken because the benefits cannot be redistributed to the first mover. Attempts in late 2002 by the U.S. Treasury to persuade a group of low-risk issuers to announce their adoption of CACs simultaneously show that the problem was considered to be serious in practice. Likewise, the suddenness and completeness of the change in market practice in 2003 could be regarded as practical evidence of first mover dynamics.

The first mover explanation is convincing enough, except for the key assumption on which it rests – it is unlikely that “breaking the established market practice” (Liu, 2002, p. 23) should have been associated with any major costs. There are several reasons.

First, the picture of market practice was never as clear-cut as it has often been drawn. We already mentioned the findings of Gugliatti and Richards (2003) and the large stock of English law bonds. Collective action clauses were more or less commonplace in every segment of the market, and investors gave no indication of being alarmed about their presence. Moreover, there exists already some practical experience with the use of CACs in restructuring situations (Dixon and Wall, 2000).

Second, we have shown that bonds with CACs do not carry higher yields, and this also had to apply to the – supposedly – first issue under New York law. Indeed, when in March 2003 Mexico eventually made what was, despite the substantial number of earlier issues of that kind, widely perceived as the first move, the yield on its New York law bond with CACs maturing in 2015 was well in line with its yield curve (IMF, 2003b). The bond was priced at 313 basis points above the 10-year US Treasury securities, which

implies at worst a penalty for CACs of no more than 10 basis points. Brazil's first issue with CACs in the following months met similar reception, whereas another Mexican issue in April 2003 was thought to have received a small discount relative to bonds with unanimous consent clauses (Kletzer, 2004).

Third, because, as was argued above, CACs appear to have been a 'non-issue'²⁸ for most investors, no major extra marketing expenses should have been required to sell the bonds. In the case of the famous Mexican issue in 2003, the experience was described as such: "Instead of opening the books in the morning and closing six hours later oversubscribed, [selling the bonds with CACs required] three days working the phones" (Gelpern and Gulati, 2007, p. 64). That is not too much additional effort for a very large issue.

Fourth, the legal and other expenses involved in changing bond documentation are probably small. As Richards and Gugiaatti (2003) reported, such changes have often occurred as a simple copy and paste exercise, sometimes even accidentally. Moreover, as Eichengreen *et al* (2003) point out, at least two alternative sets of model collective action clauses existed as of the first half of 2002, which could have been adopted at little or no cost.

For these reasons the existence of a first mover problem seems questionable with hindsight. To what extent the concerns about first mover costs were justified at the time is, however, more difficult to say.

4.5 - Borrower myopia

The IMF (2002a) and Eichengreen *et al* (2003) consider borrower myopia as a further potential explanation of delayed adoption of CACs. The assumed costs of introducing the clauses have to be borne at the time of issue whereas the benefits will not materialize until much later for two reasons. First, CACs are worthless until financial difficulties arise, and the expected number of years until that moment probably exceeds the length of the borrowing Finance Minister's appointment. Besides, issuers may be tempted to publicly underestimate the probability of default, hoping for a positive effect on financial market

²⁸ Gugiaatti and Richards (2004, p. 11): "The use of CACs has rapidly become a non-issue."

sentiment.²⁹ Or, through wishful thinking, they may actually believe that default is impossible. In either case, the expected benefits of collective action clauses are underestimated. Second, even when financial difficulties arise, for CACs to be fully effective, it has been argued that they must be included in all outstanding bond issues, and perhaps even more generally in all outstanding debt instruments. Even if each maturing debt instrument is replaced by one which includes CACs, full effectiveness is not reached before the instrument with the longest remaining maturity is retired, which may take several decades (the transition problem).

The main limitation to this explanation, however, is again that there are probably no major upfront costs involved in introducing CACs. Yet the myopia argument may have some sway. Even if the costs are low, it is plausible that elected officials may be hesitant to take an action whose benefits are uncertain and will materialise only long after the end of their term in office.

4.6 - Signalling

Tsatsaronis (1999) and the IMF (2002a) consider the possibility that borrowers were concerned that adopting CACs might be perceived by investors as a signal of bad or deteriorating credit quality. There are at least two ways in which an investor could see relevant information in the adoption of CACs. First, CACs have value only in times of crisis. A sovereign that never expects to be in financial difficulty has no direct benefit from the clauses.³⁰ The use of CACs may thus signal that the probability of default is greater than zero. In most cases, however, such information will have almost no value to the financial markets, which are typically very well informed about the borrower's financial circumstances. Secondly, at least according to the critics, majority restructuring provisions are prone to abuse. The adoption of CACs might thus be seen as preparation for an opportunistic default. By making default easier, CACs

²⁹ As a borrower representative, interviewed by Gelpern and Gulati (2007), remarked: "Our scenario is not default."

³⁰ Accordingly, John Taylor, "indicated that the United States has no plans to include CACs in U.S. government debt" (White, 2002). On the other hand, Canada and the member states of the European Union have begun to include CACs in their international bond issues despite being most unlikely to default on their debt – the intention being to stimulate progress in the adoption of the clauses by 'leading by example'.

could tip the balance in borderline cases of inability to pay. They could be a valuable (albeit negative) signal because the political willingness to honour debt obligations cannot be easily inferred from financial figures and other publicly available information. Conversely, unanimous consent provisions can act as a commitment mechanism in that they impose high costs on a defaulting sovereign.

Gugiaatti and Richards (2003) provide a very interesting test of the signalling effects of CACs. Based on the fact that issuers frequently switch between the use and non-use of CACs, the authors examine whether a change in issuing policy with respect to the clauses has any impact on the price of a country's existing stock of debt. The methodology used is an event study of abnormal returns on secondary market bonds during an event window surrounding the day a new bond issue is announced. The abnormal returns are regressed on four dummy variables, one for each of the four possible policies regarding CACs: continued issuance with / without CACs, a change from use of CACs to non-use, or vice versa. If investors saw the use of CACs as a signal of deteriorating credit quality, so the authors reason, then a change from non-use of CACs to use should be associated with negative abnormal returns on existing bonds. However, none of the four dummies prove to be significant, hence investors do not value existing debt differently when a borrower changes its policies regarding CACs. This result can be interpreted to mean that the signalling interpretation of borrower hostility towards CACs, while theoretically appealing, is not confirmed by empirical evidence.³¹

4.7 - Risk aversion

Perhaps borrowers did not so much expect to be worse off when issuing with CACs but were merely unwilling to bear the uncertainty surrounding the clauses that were largely unknown to the U.S. financial markets.

A first source of uncertainty may have been the trading performance of bonds with CACs. While it was shown above that at no point did borrowers need to fear higher borrowing costs, these findings only

³¹ It is clear that CACs cannot have much signalling value now that they have become the market standard.

refer to averages. Thus, even though the expected yield premium for bonds with CACs was zero, borrowers may have avoided the risk that a particular issue could be unpopular with the markets.

Secondly, there may have been legal uncertainty associated with CACs. There was, and still is, little or no experience with the treatment of restructuring agreements reached through CACs in U.S. courts. Moreover, network externalities may have been at work inasmuch as the market preferred to retain suboptimal boilerplate provisions merely for the sake of standardisation (Choi and Gulati, 2004, and references therein).

But even so, one of the main *raisons d'être* of the clauses is to reduce uncertainty, rather than to create it. In particular the elimination of the holdout problem thanks to majority restructuring provisions should be welcomed by borrowers.

Legal uncertainty is a much more pressing concern under German law and remains the primary reason why sovereign bonds under German law do not contain CACs (Liu, 2002). Former Finance Minister Hans Eichel announced in 2003 that legislation was underway to create a more secure legal environment for the introduction of CACs³² but as of mid-2005, market practice remained unchanged (World Bank, 2005).

4.8 - Imperfections of CACs

A more general point of criticism, which cannot only be attributed to the sovereign borrowers, is that the types of collective action clauses that were in use or being proposed during the early stages of the debate were imperfect. The various subsequent sets of model clauses and the provisions that were implemented in the series of innovative bond issues with CACs since 2003 have helped to overcome some of the deficiencies, but still there is no consensus as to which set of provisions best solves the underlying collective action problems.

³² Statement before the International Monetary and Financial Committee, www.imf.org/external/am/2003/imfc/state/deu.htm. In the meantime, a draft of the new *Schuldverschreibungsgesetz* (indenture law) has been completed.

The transition problem already mentioned is one of the disadvantages of CACs that was often discussed, in particular in comparison to the SDRM. However this problem is, tautologically, only transitory. The sooner borrowers began to include CACs in all new issues, the sooner the clauses would become fully effective. Eichengreen *et al* (2003) find no empirical evidence of a general transition problem. The yields of newly issued bonds with CACs are independent of the proportion of a borrower's outstanding debt that includes the clauses. However, low-rated borrowers pay a slight yield premium when issuing with CACs if the majority of outstanding bonds requires unanimous consent, suggesting that less creditworthy borrowers could be rightfully hesitant to make the transition.

Another drawback (again compared to the SDRM), known as the aggregation problem, is more fundamental. CACs are in the first instance issue-specific; their purpose is to solve collective action problems among the bondholders of a particular issue. Once this has been achieved, the problem reappears at the next higher level. By agreeing to debt relief, the majority of bondholders of one issue improves the chances of full repayment for another, and thus creates incentives for holdouts at the level of bond issues. Assuming that collective action problems at this level can also be overcome, it crops up again in the relationship between different classes of debt, such as bank loans and inter-government debt.

These problems can only be fully solved if a mechanism is found by which votes are aggregated across the different bond issues and perhaps other classes of debt which are affected by a proposed restructuring. Such aggregation clauses or 'super collective action clauses' have already been implemented in an exchange offer made by Uruguay in April 2003, but their optimal design remains the subject of debate (Gelpern, 2003a). Miller and Thomas (2006) suggest that the aggregation problem may alternatively be solved through "judge-mediated" sovereign debt restructuring of the type exercised by Judge Griesa in the Argentine debt exchange in 2005.

There is also debate on the size of the aggregation problem itself. "Most emerging market sovereigns have only a handful of issues in the market. Ukraine had five and Ecuador had six at the time of their respective defaults. On the other hand, Argentina had more than 80 separate sovereign issues

outstanding.”³³ The latter case would make it seem very difficult to devise aggregation clauses that can align the interests of such a diverse creditor base. Hence it is not surprising that the effectiveness of CACs in complicated debt restructurings has been doubted (see, for example, Chamberlin, 2002b).

An empirical test of the size of the aggregation problem is again provided by Eichengreen *et al* (2003, p. 27). “If aggregation is costly, then investors will presumably demand a premium in order to hold claims on an issuer with multiple instruments in the market, especially when there is a significant likelihood that its obligations may have to be restructured.” Indeed, the authors find evidence of a “multiplicity premium”: Primary market yields increase systematically with the number of outstanding bond issues, particularly for less creditworthy borrowers.

It is important to note, however, that the failure to solve the aggregation problem could only rightfully be cited as a disadvantage of CACs relative to the SDRM. The problem has always existed, but it may just have become more obvious since CACs explicitly point towards the possibility of default. Ad hoc procedures of restructuring are just as prone to collective action problems among individual bond issues. Once workable aggregation clauses become a standard feature of CACs, what may have been perceived as a weakness should soon prove to be an additional benefit of CACs.

Summing up, collective action clauses fall short of what the Sovereign Debt Restructuring Mechanism promised to achieve with regard to transition and aggregation. In particular, even ‘super collective action clauses’ do not enable a comprehensive debt restructuring in which broad classes of debt instruments are negotiated simultaneously, as would be necessary to overcome collective action problems also at the higher levels. But the SDRM is no longer a valid point of comparison and perhaps never was. CACs represent the best course of reform that is currently available and as such should not have been resisted for their deficiencies.

³³ Eichengreen *et al* (2003, p. 15). Other sources even report that Argentina had 152 different bond issues outstanding.

4.9 - Indifference

It was said at the beginning of this section that there is no direct indication that the sovereign borrowers were downright opposed to adopting the new clauses in New York law bond issues. The potential concerns we have been discussing are ones which third party observers, such as the IMF or academics, assumed to exist.

There is, however, plenty of evidence to suggest that many sovereigns did not give the inclusion of CACs much consideration, that the question of CACs and even choice of governing law was a matter of indifference to them, and that they were unperturbed by the repeated public sector advocacy for CACs during the late 1990s. This is confirmed by Robert Gray (2003, p. 9): „As Chairman of a trade association that represents underwriters, I would be the first to admit that the subject of CACs had not been figuring in negotiations before bond issues were mandated or even in the pre-launch negotiations. The inclusion or not of CACs was left to the issuer’s and the underwriter’s legal teams to negotiate on an ex post basis.” Underwriters in turn have “a strong home country bias” in choosing the governing law (Esho *et al*, 2004). As mentioned before, Gugliatti and Richards (2004) recall instances in which not only the issuer, but also the legal advisor was unaware of whether a given bond included CACs. More generally, they detect “a certain randomness in the particular terms and conditions included in emerging market bond issues into the Euromarket, including the use or non-use of CACs and even the governing law of bonds” (p. 11). Clearly borrowers would not leave the decision to their agents if they had any strong preferences regarding the use of CACs, and if they did, they would know the outcome of the decision.

This apparent lack of interest could be explained by the fact that borrowers tend to focus on markets and currencies, rather than on the contractual details. For example, New York law is the standard choice if the bond is to be denominated in US Dollars, and until the change in market practice, this implied unanimous consent provisions by default. Similarly, “issuance in Japanese yen is invariably under Japanese governing law and therefore inevitably includes CACs” (Gugliatti and Richards, 2003, p. 10). Still, if the sovereign borrowers had had strong preference either for or against the use of the clauses, in

the vast majority of cases there would have been no legal or other reasons to prevent them from deviating from standard issuing practice in a particular market.

5 – Conclusion

5.1 - Summary

Ever since the publication of the “Rey Report” in 1996, public sector institutions have been emphasising the benefits of collective action clauses for more orderly debt restructurings. Yet it took around seven years for a change in market practice to materialise, due at least in part to the opposition or lack of interest of market participants. It seems to follow logically that the benefits seen by the public sector must have been matched by costs of similar magnitude that could explain the lack of enthusiasm of issuers and investors.

Our review of the empirical literature on bond yields, which finds no persistent premium on bonds with CACs, is consistent with such a balance of costs and benefits, but also with CACs being a ‘non-issue’ for investors, i.e., both costs and benefits are negligible. We have discussed a number of potential reasons for the well-documented opposition of some investor representatives prior to 2003. Individually, none of these reasons are utterly convincing, and even in the aggregate they do not seem to provide the whole picture. Thus, we are left with an explanation gap: Allegedly and plausibly, CACs have benefits, but the opposing costs are not easily identified.

A similar picture emerges from the analysis of the sovereign borrowers’ incentives. Their initial refusal to adopt CACs in New York law bonds presented a puzzle to public sector analysts. Many explanations were brought forward, but again they are not fully convincing.

The concluding section attempts to fill this explanation gap. It discusses two aspects of the debate on collective action clauses which we have so far ignored: Externalities, due to which borrowers do not

enjoy all the benefits of CACs, and the role of bailouts, which distort the incentives of both borrowers and investors.

5.2 - Externalities

If there appears to be a balance of costs and benefits of CACs, as suggested by the evidence on bond yields, but the costs are elusive, then perhaps some of the benefits take a form that is invisible to market participants. CACs likely have positive externalities, that is, they indeed have a positive impact on debt restructurings, but these benefits accrue mainly to parties other than the issuers and bondholders.

The official sector, especially the IMF, appears both as a creditor and as a third party in this context. In the former capacity, the IMF has a very immediate interest in preventing defaults to protect its own loans,³⁴ and in involving bondholders for ‘private sector burden sharing’ in restructuring negotiations when default is unavoidable. CACs can also reduce the pressure for new lending by the IMF, which would be very much in the interest of organisations such as the G-10 or its member countries, upon whose funding the IMF critically depends.³⁵

This is not to say that the public sector’s promotion of CACs was purely self-interested. When a Pareto-improving reform creates positive externalities, or reduces negative ones, a third party facilitator may be needed to help bring it about. For instance, CACs could reduce financial contagion by enabling the orderly resolution of a crisis before it spreads to other countries and other markets (White, 2002; Taylor, 2002; Weinschelbaum and Wynne, 2004). This is a benefit which borrowers will not sufficiently take into account. “[I]ndividual countries, with only weak incentives to internalise this externality, may display a reluctance to adopt CACs that is excessive from a social point of view” (Eichengreen *et al*, 2003, p. 34).

³⁴ IMF and World Bank loans take priority over other forms of debt (White, 2002), but the IMF has generally provided assistance before the debt crisis develops to the stage where this seniority would become important.

³⁵ For Eichengreen and Mody (2000), reducing the necessity for the IMF to intervene in debt crises is the main justification for wider use of CACs, rather than the concern for the sovereign borrower and private creditors. Similar opinions can be found in Taylor (2002).

More generally, the industrialised world has an interest in the economic wellbeing, and therefore in the sustainability of the financial systems and debt schedules, of less developed creditor countries. Speaking for the US Treasury, John Taylor (2002, p. 1) said, “Clearly we would like to see fewer crises. We would like to see a sustained recovery of investment in the emerging markets along with lower interest rates. Ultimately we would like to see the poor developing countries become truly emerging market economies.” Thus, by promoting financial stability and growth, collective action clauses may create positive externalities which can explain the reluctance of many issuers to adopt the clause even in the absence of major costs.

5.3 - Bailouts

There is a potential cost of collective action clauses that has not been mentioned so far. We have characterised the clauses as an option for the borrower and the majority of bondholders to take a course of action (majority amendment) that is otherwise unavailable, without ruling out any alternative paths to crisis resolution. Some market participants would probably disagree with this interpretation.

After all, going back to the very beginning of this paper, the initiative for financial market reform and in particular for CACs was partly driven by the need to develop alternatives to crisis resolution through bailouts. Many academics and official sector representatives have expressed the hope and expectation that bailouts would become obsolete once all sovereign bonds contain CACs. It is debatable whether this expectation is realistic, but the mere possibility seems to have been perceived as a serious threat by some investors and borrowers, for whom debt crisis resolution through third party assistance is a very convenient solution. Investors can obtain higher recovery rates than could be achieved without bailout. The troubled borrowers receive new credit at low interest rates, even though the loans are often conditioned on the promise of economic reform in the debtor country. Therefore, by perhaps reducing the likelihood of a bailout, CACs may impose large indirect cost on both sides of the market. The best source of support for the ‘bailout’ explanation of resistance to CACs is again Michael Chamberlin (2002b, p. 5), who, in an effort to preserve the welcome financial aid, defended bailouts (“The term “bail-out” is unduly

pejorative...") while at the same time attacking CACs and the SDRM. Portes (2003, pp. 11) cites other investor representatives who make no secret of their preference for official financing over private sector involvement, and warns that "as long as the official sector provides bailout packages, there is no incentive for the markets to want CACs". This view proved to be overly pessimistic when Mexico marketed its New York law issue with CACs, but it seems likely that the change in market practice would have occurred earlier absent the incentive effects of bailouts.

5.4 - A Final Word

The intention of this paper is not to endorse the general adoption of collective clauses, but to demonstrate that many of the arguments and concerns that have been, or could be, brought to bear against them are weak for either of two reasons. First, many of them are easily invalidated on the basis of empirical evidence (e.g. the myth of higher borrowing costs or the transition problem) or on the basis of other facts, e.g. the imaginary first mover problem. The second set of arguments may have more sway, but they are immaterial from a welfare perspective. For example, differences in opinion about the optimal voting threshold have predominantly distributional effects and therefore should not stand in the way of progress. Likewise, the preference of investors for bailouts over CACs is understandable, but it should not impress policymakers.

Sovereign bonds governed by the laws of Germany are currently the last stronghold of unanimous consent. If collective action clauses are as effective and beneficial as their proponents claim, then there is no reason to stop the reform process after the recent success in the U.S. market. Once the German legislator has established legal certainty as regards the permissibility of majority amendment, the international financial community can safely ignore any resistance from investors or borrowers and apply whatever pressure they consider adequate to effect the desired change of issuing practice in the German market. In the case of New York law bonds, the threat of the SDRM arguably helped to persuade borrowers to make the transition. That threat will not work a second time. But the strongest card has not yet been played: A credible commitment to no more bailouts should help to establish collective action

clauses in the sovereign bond markets once and for all. This may seem like a catch-22 situation - the call for collective action clauses arose from the need to stop bailouts, and now the end of bailouts is advocated as a means to push CACs - and that is probably what it is.

Individual Enforcement Rights in International Sovereign Bonds

Sönke Hässeler

Abstract

Sovereign bond contracts are notoriously hard to enforce. The few rights that bondholders have can be vested either collectively or individually. It seems that investors traditionally had a preference for the latter, which hindered financial market reform projects, such as the universal adoption of collective action clauses or trust structures.

This paper discusses theoretically and empirically whether it is indeed in the bondholders' collective interest to be allowed to individually sue and attach the debtor country's assets following a default. Market reaction to the landmark case of *Elliott Associates v. Peru* is tested to assess just how much bondholders actually value individual enforcement rights. It is found that even the single most important event to reinforce creditor rights in recent years provoked no systematic movement in bond prices. We thus conclude that perhaps the importance of individual enforcement rights to the markets has been exaggerated and we therefore recommend ignoring any opposition from market participants that may arise during the necessary transition to more collective enforcement rights.

Keywords: sovereign bonds, enforcement rights, collective action clauses, fiscal agent, trustee

JEL classification: F34, K12, K33

1 – Introduction

It is evident that the financial markets lack efficient procedures to cope with sovereign default. While dealing with any type of sovereign debt is difficult in the absence of a bankruptcy procedure for states, bonds pose particular challenges. This is due to a number of factors, including the multitude and anonymity of bondholders, the diversity of instruments in use, and not least to the heterogeneous and arguably problematic nature of creditor rights. Several reform proposals were made, and to varying extents pursued, for more efficient crisis resolution procedures. Progress on these reforms, however, was hampered on the one hand by opposition from market participants who sought to protect their vested interests, and on the other hand by disagreement among academics and public sector institutions as to what the ideal crisis resolution mechanism might look like.

As in the context of corporate bankruptcy, we are faced with a trade-off between *ex ante* and *ex post* efficiency. But here we are dealing with sovereign states, which are not bound by any, and in particular not by any one, foreign legal system. This added complication has so far thwarted any attempts to address that trade-off in a satisfactory manner. *Ex ante* efficiency would require procedures that strongly discourage debtor countries from defaulting because a default harms all parties concerned, except possibly the debtor itself. If, however, deterrence against default has failed or some circumstances beyond the country's control prevent it from honouring its debt obligations, *ex post* efficiency demands that the inevitable restructuring should be as smooth and as fair as possible. The two perspectives are thus inherently irreconcilable. This is how the shape of bondholders' rights to enforce their claims came to be at the centre of the most important debates on reforming sovereign debt markets in recent years.

The first of these debates originated in the second half of the 1990s and eventually led to a change in market practice with respect to the use of so-called collective action clauses. These provisions are now included in most bond contracts and allow a super-majority of bondholders to agree on debt relief for the sovereign borrower. The resulting change in the bond's financial terms then becomes binding for all

bondholders, thus removing the holdout problem and promising smoother restructurings. The second initiative concerns the appointment of a trustee to represent the bondholders in their dealings with the debtor, and in particular to centralise any enforcement action against the debtor in the case of a default. While some progress has been made, the use of trust structures has yet to become the market standard, despite decades of publications that stress their advantages.

Both developments represent a shift away from individual enforcement of bondholders' rights towards greater collectivism, corresponding to a weakening of *ex ante* deterrence for the benefit of *ex post* efficiency in the restructuring process. Whether or not this is good news for sovereign bond markets is a question that must be addressed for the sake of pending and future reform proposals. This paper presents a spectrum of theoretical perspectives on the merits or otherwise of individual enforcement rights (IERS).³⁶ We then study market reaction to the settlement of *Elliott Associates v. Peru*, a case that arguably shaped market views on independent sovereign debt enforcement.

The desirability or otherwise of IERs in sovereign bond contracts has received some attention in the literature. Fisch and Gentile (2004) suggest “measuring the extent to which investors value the litigation option” – a suggestion which is picked up in the present paper by means of a time series study, and in Hässeler (2010) in a cross-section setting. The latter is in a sense also a reverse implementation of Sturzenegger and Zettelmeyer’s (2006a) proposal to use insights about the effectiveness of the litigation threat for the construction of sovereign debt pricing models. Hässeler (2009) provides a comprehensive account of various perspectives on collective action clauses. Kahan (2002) sheds light on the trade-off between individual versus collective rights in corporate bonds. Finally, two as yet unpublished papers also investigate market reaction to *Elliott* and are thus closely related to the present study. Alfaro *et al* (2008) ask whether recent individual bondholder action constitutes a disciplining mechanism comparable to the gun boat-backed enforcement regime of the early 20th century. Bradley *et al* (2008) investigate

³⁶ We are concerned only with the enforcement of the basic debt claim, rather than with the enforcement of any of the other provisions of the bond. Kahan (2002) discusses the enforcement of non-monetary bondholder rights.

primary market spreads following *Elliott* and the subsequent legal events. Their analysis is, however, based on very – perhaps unreasonably – long time horizons, whereas the present study looks at instantaneous effects.

The remainder of this paper is structured as follows: The next section provides some historical background on sovereign bond enforcement. We then spell out what we mean by individual enforcement rights and where to find them. Section four offers some theoretical perspectives on IERs. Section five is dedicated to the court case which forms the basis of the empirical analysis, and to the reactions to the case in the media and the literature. Section six presents the empirical methodology and results; section seven concludes.

2 - Historical Perspective

Gunboats...

The ability of bondholders to take defaulting sovereigns to court is a relatively recent phenomenon. When especially Latin American countries began to finance their growth increasingly through the bond markets in the 19th century, they were protected from lawsuits by the doctrine of absolute sovereign immunity, which posited that no government could be sued in a foreign court without its consent. In that era, aggrieved creditors' options were restricted to bundling their voices in institutions such as the British Corporation of Foreign Bondholders, and trying to persuade their national governments to apply political pressure on the debtor country. Common wisdom has it that such pressure regularly took the form of military action, as in the famous case of the joint British, German and Italian blockade of Venezuelan ports in 1902.

Tomz (2006) cites support for this ‘gunboat hypothesis’ from major authorities such as Rudiger Dornbusch and the Economist magazine. Mitchener and Weidenmier (2005) find that between 1870 and 1913, the exertion of military pressure or political control over a debtor country was a common and

successful enforcement strategy. Likewise, Tomz finds a positive and significant correlation between defaults and militarised disputes but goes on to look at the deeper causes of the hostilities. Examining historical political documents, he finds no indication that gunboat diplomacy was ever motivated by the desire to satisfy domestic creditors' claims but rather by other grievances, often involving harm done to the creditor country's assets or citizens in the course of unrest in the debtor country.

According to Tomz, the statistical association between gunboat incidents and default periods is therefore spurious. The author does not attempt to explain this result, even though at least one potential cause of the correlation seems quite obvious. A civil war or similar condition in the debtor country is likely to cause two things: first, a deterioration of the country's ability to repay its debts and hence a higher default risk, and second, adverse effects on the property and citizens of other countries, which in turn may seek compensation through the use of military force. So it is quite natural that defaults and militarised disputes will tend to co-occur. A better test would be to compare two countries' probabilities of sending gunboats, where both countries have been affected by the civil war in the debtor country, but only one of them has an interest in debt collection.

One might think that the era of enforcement by gunboats, if indeed it can be labelled as such, formally ended in 1907 with the signing of the Hague Convention on "The Limitation of Employment of Force for Recovery of Contract Debts". Alfaro et al (2007) would disagree, for they examine a number of militarised interventions by the United States in Central American countries in the period 1905 to 1929, all of which were intended to protect the interests of US bondholders or to pre-empt similarly motivated interventions by European states. But be that as it may, the Great Depression finally put an end to US involvement in debt collection, so with gunboats gone for good and sovereign immunity still firmly in place, the position of bondholders was arguably at its weakest during the time that followed.

The ability of the sovereign bond market to survive in a setting in which an opportunistic defaulter had to fear only loss of reputation was tested when, due to the Depression, all but three Latin American countries fell behind on their debt service. Bondholder committees were formed to negotiate with the debtor countries but the debtors lacked incentives to reach an agreement in a timely fashion and the

committees lacked the power to bind all bondholders when an agreement was reached. Thus, as a result of insufficient enforcement mechanisms, the sovereign bond market dried up and private finance was replaced by lending from other governments and international institutions, in particular development banks (Fish and Gentile, 2004).

...and Courts

Two developments then brought bondholders back into play. The first was yet another shift in the composition of lending to developing countries. The oil price shocks of the 1970s sent large sums flowing from the oil exporting countries to commercial banks and then on to Latin American countries that needed to finance their increased expenditures on oil. A number of those countries subsequently defaulted in the following decade. The defaults were cured through what became known as the Brady Plan of 1989: The debtor countries were granted substantial reductions in the face value of the debt, and the banks were able to sell on the syndicated loans to the market in the form of Brady bonds. As a result, by the late 1990s there was once again an active market for Latin American bond debt.

Secondly, the position of bondholders was strengthened by important changes in the legal environment. The doctrine of absolute sovereign immunity was abandoned in all major jurisdictions between the 1950s and the 1970s. As states and state-owned entities increasingly engaged in international commercial transactions, immunity gave them an unfair advantage over private sector competitors and was therefore restricted wherever states or their agents acted as commercial players (Alfaro et al, 2007).³⁷ The relevant legal documents include the Tate Letter by the US State Department (1952), the European Convention on State Immunity (1972), the US Foreign Sovereign Immunities Act (FSIA, 1976), and the British State Immunity Act (1978). So when the 1980s heralded the next wave of defaults in Latin America, sovereign debtors were for the first time vulnerable to suits from creditors.

³⁷ Another interesting justification is that “the U.S. felt uneasy with granting sovereign immunity to Soviet Union state owned companies operating in the U.S.” (Sturzenegger and Zettelmeyer, 2006b, p. 37)

It was not long before the first creditors began to explore the newly-opened avenues of debt enforcement. Arising out of the Costa Rican default in 1981, *Libra Bank Ltd. v. Banco Nacional de Costa Rica* was the first notable example of creditor litigation.³⁸ Banco Nacional initially sought defence in sovereign immunity, but the New York court found that immunity had been explicitly waived in the loan contract. Furthermore, the *act of state doctrine*, which says that the courts of one country must not judge on the sovereign acts of another, was raised for defence but to no avail. This first case, although nominally successful, already demonstrated quite clearly the limited value of the litigation remedy. The syndicate of banks surrounding Libra had claims against Banco Nacional amounting to \$35 million, however, only \$2.5 million worth of assets could be located within the jurisdiction of the New York court, and the sum that the plaintiffs were eventually able to attach was lower still at \$800,000 (Fisch and Gentile, 2004).

In 1985, the courts once more ruled against Costa Rica in *Allied Bank International v. Banco Credito Agricola de Cartago*. Besides the act of state doctrine, another popular defence was rejected, namely *comity*, a rather vague concept which US courts have tended to interpret to mean that another state's actions are admissible if they are in accordance with US policy. The *Allied* case has been identified as the first instance of *holdout litigation* because at least the later stages of the dispute arose from the unwillingness of Allied's client, Fidelity Union, to agree to the terms of a restructuring that had already been accepted by all other banks in the syndicate. Yet, despite the success in court, Allied eventually settled for the same terms as the other banks and so the holdout strategy did not pay off.

Sovereign immunity lost the last of its sway in *Republic of Argentina v. Weltover* (1992). The case established, in line with earlier judgements, that issuing bonds is a commercial activity in the sense of the FSIA, and the fact that interest payments are made in New York entails that the United States are directly affected so that US courts can exercise unconstrained jurisdiction. A fourth common defence was denied

³⁸ More detailed accounts of these important cases are to be found in Fisch and Gentile (2004) and Sturzenegger and Zettelmeyer (2006a), amongst others.

in *CIBC Bank and Trust Co. (Cayman) Ltd. v. Banco Central do Brazil*. Banco Central invoked the law of *champerty*, which bars litigation based on claims that were purchased with the intent of bringing lawsuit. Once again the court sided with the plaintiff.

The position of creditors was further strengthened in *Pravin Bankers v. Banco Popular del Peru* and *Elliott Associates v. Republic of Panama* (both 1997), where the courts ruled that claims based on debt that was purchased at deep discounts on the secondary market are valid and enforceable. With this history of creditor litigation against defaulting sovereign borrowers in mind, we next describe the actual set of enforcement rights that form the basis of any such litigation, focussing in particular on the distinction between individual and collective rights.

3 – Individual Enforcement Rights

We might speak of pure individual enforcement rights whenever three conditions apply: First, an individual bondholder is unconstrained in her right to initiate legal action against the sovereign debtor. Second, she may independently of other bondholders accelerate her bonds, i.e. declare them repayable immediately and in full in an event of default. Absent the individual right to accelerate, litigation will hardly be worthwhile because she could then only sue for any missed payments of interest or principal, rather than for the face value of the debt. Third, there should be no obligation to share the proceeds of any litigation with her fellow bondholders.

Such a combination of rights is rarely encountered. Trust structures and collective action clauses severely limit the extent of individual enforcement rights and the scope for exerting them, respectively.

Collective Action Clauses

Enforcement in the sense of this paper becomes relevant only after a default, and a default is generally the result of a country's failure to restructure its debts in time. Sovereign bonds were hardly designed to be restructured. Until recently, the majority of bonds outstanding did not provide for any orderly procedure

by which the financial terms of the instrument could be altered in times of financial distress, for example so as to reduce the principal or coupon rate, or to extend the maturity of the bond. A sovereign debtor who faces payment difficulties will in most instances have to ask bondholders to offer their securities in exchange for new ones that grant some sort of debt relief. Participation in such an exchange offer is voluntary and therefore less than complete.³⁹ The debtor country thus has an unpleasant choice to make between paying off the holdouts in full, which is expensive and unfair to those creditors who did tender their bonds, or refusing to service the left-over bonds, which is equally unfair and potentially even more expensive in case those bonds end up in the hands of investors who are bent on making a profit from suing the debtor for full repayment.

This is where collective action clauses (CACs) come in.⁴⁰ CACs make for easier *amendment* of the bonds, so that in theory at least there is no need and no scope for *enforcement*. Ideally, the debtor country will approach bondholders before default becomes imminent, and will negotiate with them a change in the financial covenants of the bond to effectuate the necessary debt relief. If the required majority (typically two-thirds to 85%) of bondholders accept the amendment, the new terms become binding for all bonds of that issue, so that there is no basis for litigation. Unfortunately though, debtor countries tend to leave it until too late to engage bondholders, i.e. they default first and negotiate later. Moreover, CACs are, as mentioned above, not yet a feature of all new bond issues, and certainly not of all bonds that are outstanding in the market.⁴¹ This undermines the effectiveness of the clauses.

Governance Structure

Another important determinant of the extent of individual enforcement right is what we shall refer to as the governance structure of a bond (Hässler, 2010). The majority of sovereign bonds are traditionally

³⁹ Participation rates in recent exchange offers have ranged from 76% (Argentina, 2005) to more than 99% (Ukraine, 2000) (Sturzenegger and Zettelmeyer, 2008).

⁴⁰ See Hässler (2009) for a much more detailed discussion of CACs.

⁴¹ Current estimates suggest that just over half of all outstanding bonds feature CACs. See Hässler (2010) for details.

issued under a fiscal agency agreement, where the issuer appoints a fiscal agent to perform administrative duties, mainly concerning the distribution of payments of principal and interest. The fiscal agent is the agent of the issuer; the right to enforce the bond in the case of default rests with the individual bondholders. They may accelerate their claims under pre-defined conditions and initiate legal proceedings against the debtor without regard to the interests of other bondholders. Sometimes, however, a vote by 25% of the outstanding principal is required for acceleration.⁴²

The issuer may, however, also appoint a trustee to represent and safeguard the interests of the bondholders. The extent of the trustee's duties and powers varies depending on the applicable legal system. We shall focus here on English and New York state law because almost 80% of the bonds currently outstanding are subject to either of these jurisdictions.

Under English law, the trust deed will bestow extensive competencies upon the trustee to enforce the bonds in case of default, while individual enforcement rights are severely restricted. The trustee shall, either at its own discretion or when so instructed by a certain proportion of bondholders, take enforcement action against the debtor upon an event of default, i.e. the trustee shall accelerate the bonds and initiate legal proceedings. Any proceeds from such litigation will be shared pro rata among the bondholders. The bondholders will reclaim their IERs only if the trustee fails to take appropriate action despite the instruction to act and an offer of indemnity from at least 25% of the bondholders.

The division of rights between trustee and individual bondholders under New York law is by contrast strongly influenced by the Trust Indenture Act of 1939, even though the Act does not apply to sovereign bonds.⁴³ It stipulates that every bondholder has an unqualified right to sue for any overdue payment of interest or principal. Economically more important though is the right to sue for accelerated amounts, which rests with the trustee. A US-style trust indenture does not provide for the proceeds from an enforcement action to be shared.

⁴² For more details, see Buchheit and Gulati (2002).

⁴³ Roe (1987) provides the legislative history of the Trust Indenture Act and argues that the restrictions it imposes on collective action were never justified, not in the 1930s and even less so now.

Despite several policy initiatives and a growing body of literature that highlights their advantages, trust structures remain far from becoming the market standard in sovereign bonds. Only a minority of new bond issues featured a trustee in recent years (Häseler, 2010).

Prevalence of IERs

How common is it for bondholders to have a meaningful right, as well as the opportunity, to pursue their claims independently of other bondholders? Table 1 below enumerates the four possible situations that determine the scope for individual enforcement. Estimates of the relative frequencies of these situations are provided for New York and English governing law, based on the dataset used in Häseler (2010).

Scope for Individual Enforcement?	CACs	no CACs
Trustee	essentially none (21% / 2%)	severely restricted (6% / 12%)
no Trustee	severely restricted (46% / 29%)	limited (27% / 57%)

Table 1: The scope for individual enforcement with and without CACs and trustees, and relative frequencies under New York / English law as of March 2009

Whenever a bond exhibits collective action clauses, there is a chance that the debtor country might be able to restructure it without ever defaulting, in which case enforcement ceases to be an issue.⁴⁴ If, however, the sovereign does not conclude negotiations with the bondholders until after a default, it is vulnerable to enforcement action for a period that may or may not be long enough for creditors to succeed in the courts and to exact a settlement. It seems likely that in most future debt crises, the debtor country

⁴⁴ The presence of CACs does not necessarily mean that they will be used; see the case of Pakistan, 1999 (Dixon and Wall, 2000).

should be sufficiently swift in using CACs for a restructuring to frustrate any enforcement action.⁴⁵ Thus, the scope for individual enforcement is at best ‘severely restricted’ with CACs.

Trust structures, on the other hand, represent a bar to individual enforcement under English law, and a severe impediment under New York law. In the latter case, an individual bondholder may at most hope to sue for overdue payments, but not for the face value of the bonds. Moreover, a trend may begin to emerge towards fully collective enforcement even in American-style trust indentures,⁴⁶ so that what little there was of IERs in that segment of the market may be set to disappear.

We are left, then, with the case of no CACs and no trustee, where bondholders are generally free to enforce their claims individually. Yet, the important right of acceleration sometimes requires a vote by a quarter of the bondholders so that IERs are somewhat limited even here.

Looking at the information on market practice in Table 1, we see that the proportion of English law bonds with strong IERs (no CACs, no trustee) is greater than the proportion of New York law bonds in the same category. The reverse holds true for bonds with the opposite features, i.e. those with the least scope for individual enforcement. This pattern runs counter to a picture sometimes drawn in the literature, according to which the US market has traditionally tended towards individual action and unconstrained enforceability of bond contracts.

Vultures

Having defined IERs and sketched their prevalence under various conditions, it is time to admit that we have so far discussed only half the story of enforcing a sovereign bond. After the demise of sovereign immunity in the 1970s it has become relatively easy for bondholders to obtain a court ruling against a defaulting debtor country. The most difficult part remains, however, turning that judgement into cash.

⁴⁵ The mean period between the dates of filing and settlement in 14 cases listed in Alfaro *et al* (2008) is about 21 months, and almost 27 months not counting the numerous suits against Argentina.

⁴⁶ Grenada (in 2005), Belize (in 2007) and the Republic of Congo (in 2007) have issued bonds under New York law that nonetheless vest all enforcement powers in the trustee (Buchheit, 2007).

A creditor will typically have to locate non-diplomatic assets of the debtor within the relevant jurisdiction that can be attached to satisfy the claims. Anticipating this, debtor countries will try not to keep attachable assets in the jurisdictions that govern their debt obligations. An innovative strategy is thus crucial to the creditor's success. Because of the extraordinary efforts required to enforce a sovereign bond, only specialised investment companies can hope to prevail. Such companies have come to be known as 'distressed debt funds' or, more colourfully, 'vulture funds'. They have made the exercise of IERs part of their business strategy and are therefore at the focus of views on individual enforcement, positive and negative alike.

Vulturing is a fast-growing business. The IMF is reported to have counted at least 54 vulture cases targeted at 12 countries, with claims summing to 1.5\$ billion.⁴⁷ Most vulture suits are successful, resulting in a settlement that yields a large profit for the investment company.⁴⁸ However, since this business practice is considered unfair by many and has often undermined development aid programmes, legislation has been introduced in the US and the UK to stop vulturing activities.⁴⁹

4 – Some Theory

This section examines the merits or otherwise of individual enforcement rights from various angles. We begin by looking at their implications for general welfare and then narrow the perspective down to bondholders. It is the bondholders whose attitudes towards individual enforcement ultimately shape

⁴⁷ Online article "Vulture Funds: Ugly Name for an Ugly Reality" at <http://www.afjn.org/focus-campaigns/other/other-continental-issues/82-general/791>. (All online sources were last accessed on April 3rd, 2010). It must be noted, though, that most vulture action to date is based on claims arising from bank loans, rather than bonds.

⁴⁸ African Development Bank Group: "Vulture Funds in the Sovereign Debt Context" at <http://www.afdb.org/en/topics-sectors/initiatives-partnerships/african-legal-support-facility/vulture-funds-in-the-sovereign-debt-context>.

⁴⁹ The 'Stop VULTURE Funds Act' was introduced to the US Congress on June 18th, 2009 – see www.opencongress.org/bill/111-h2932/show. Simultaneously, similar legislation was drafted in the UK – see www.guardian.co.uk/business/2009/may/06/vulture-funds.

outcomes in the secondary bond markets and whose views, in aggregate, we can therefore analyse empirically.

The Welfare Perspective

A sovereign bond contract, and the enforcement provisions in it, should provide incentives for the parties to act efficiently, i.e. in line with considerations of general welfare. The enforcement regime should most importantly deter the debtor from defaulting too readily and it should discourage the creditors from making excessive use of their legal rights. This section discusses whether individual or collective rights structures are more likely to achieve these aims.

Debtor's incentives: deterring opportunistic defaults

In the absence of a legal and institutional framework akin to corporate bankruptcy, the very existence of sovereign bond markets depends on some mechanism that will induce the debtor country to honour its obligations. The more frequently debtors default, the more reluctant investors will be to lend, therefore the higher the spreads and the lower the amount of borrowing.⁵⁰ The result is a loss of welfare for both sides. Acting as a deterrent against default, legal enforcement of the bonds may help to reduce borrower moral hazard. Whether one believes that deterrent to be effective depends on one's view of sovereign default. Whether any such deterrent is stronger with individual – as has often been maintained⁵¹ – or with collective enforcement rights is equally unclear *a priori*. Each question is addressed in turn below.

To discuss whether enforcement has a deterrence effect, it may be helpful to provide a framework of the various views on sovereign default that have been put forward in the literature. Figure 1 does just that. Fundamentally, if the threat of enforcement is to have an effect on borrower behaviour, borrowers must have a *choice* between servicing and not servicing their debt. The question is whether defaults are better

⁵⁰ The connection between enforcement and the amount of lending is drawn, *inter alia*, by Alfaro et al (2008), Fisch and Gentile (2004), and Sturzenegger and Zettelmeyer (2006a).

⁵¹ See, for example, Fisch and Gentile (2004).

described as the consequence of a country's lacking *ability to repay*, in which case we might speak of distress defaults, or as resulting from an *unwillingness to repay*, in which case defaults are considered strategic or opportunistic.

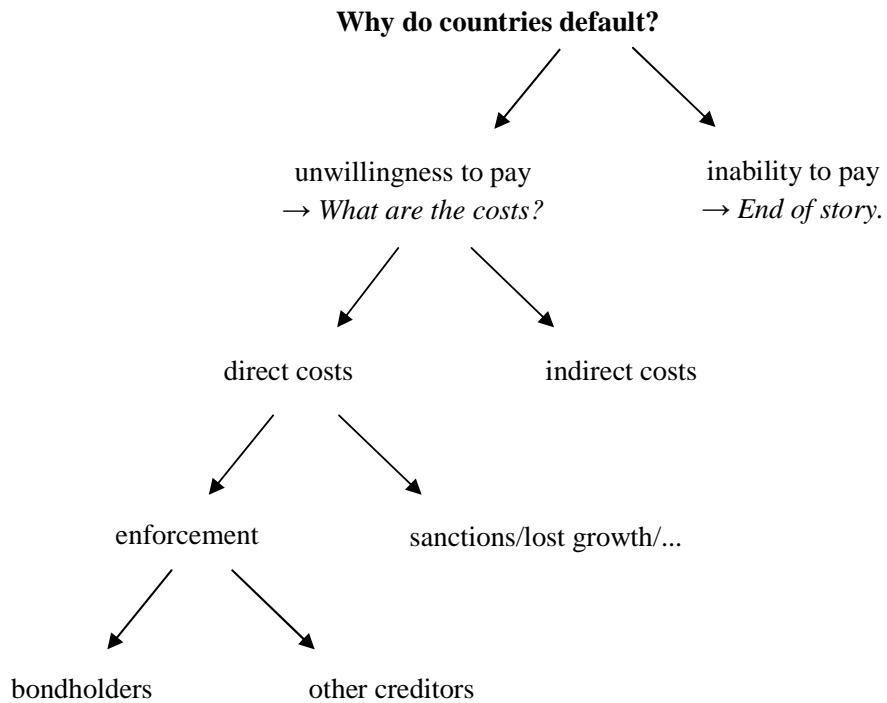


Figure 1: Various views of sovereign default

Which of these two descriptions better fits a given default episode will depend on the specific circumstances. According to the Inter-American Development Bank (2006, p. 236), “there is little evidence [...] of strategic sovereign defaults ever occurring.” Bratton and Gulati (2003, p. 17) confirm that “sovereigns as a practical matter only default under identifiably bad conditions.” This was, however, written before Ecuador’s default in 2008. The country set a precedent when it asked its bondholders to forgive 65% of their claims even though Ecuador enjoyed at the time an “enviably manageable external debt profile” (Buchheit and Gulati, 2009, p. 22). In this striking example of unwillingness to repay,

Ecuador did not even go to the trouble of citing financial necessity as a rationale for the default. At the other extreme, one of the clearest cases of inability to repay is Grenada in 2004 (Buchheit and Karpinski, 2006). Hurricane Ivar had altogether wrecked the country's capacity to generate the revenues needed to service the bonds. The strictest enforcement regime could not have deterred this default.

Sturzenegger and Zettelmeyer (2006b) propose a reconciliation of the ability and willingness to pay perspectives. We shall focus here on the latter, continuing down the left-hand side of Figure 1. If the debtor country has a choice to make between repaying and repudiating the debt, this immediately suggest that the decision must be the outcome of a cost-benefit-analysis. Much has been written about the elusive costs of default, without which sovereign bond markets could not exist. The first theoretical investigation into the question as to why sovereigns ever repay was a seminal paper by Eaton and Gersovitz (1981). Their model of sovereign borrowing shows that under certain conditions, borrowers will find it in their interest to honour their obligations even if default entails no costs other than loss of reputation and the resulting exclusion from future borrowing. Loss of market access is costly because countries are assumed to borrow in order to smooth consumption across the business cycle.

The subsequent literature has criticised Eaton and Gersovitz' reliance on reputation as the sole compliance-inducing mechanism and has discussed additional costs of default: exclusion from international trade (theoretically: Bulow and Rogoff, 1987; empirically: Rose, 2005), political costs (IADB, 2006), damage to the financial sector (Borensztein and Panizza, 2008),⁵² or more generally output losses (Dooley, 2000). Perhaps the strongest attack on Eaton and Gersovitz' type of reputation models came from Bulow and Rogoff (1988). The authors contend that a reputation for repayment does not enhance a developing country's ability to borrow. According to them, the most likely candidate for a deterring cost of default is the threat of legal action by the creditors.

⁵² This was also perceived to be the direst potential consequence of the Greek debt crisis in 2010, besides the danger the crisis posed to the common European currency.

Such ‘enforcement costs’ have made their way into the debtor’s considerations since the demise of sovereign immunity and the series of creditor-friendly court decisions in the 1980s and 1990s. They can arise in at least five contexts: First, the debtor will have to mount a legal defence against the creditors. Second, creditor litigation may trigger hostilities from other parties. Third, the debtor will have to incur expenses to safeguard its assets within the relevant jurisdiction from attachment by the creditors. Fourth, the debtor may nevertheless lose such assets to, or be forced to settle with the creditors. Finally and most importantly, creditor litigation may result in the borrower’s exclusion from additional funding, for example because new investors will hesitate to lend when there is a risk of the fresh funds being attached by the existing creditors.

The expected size of enforcement costs will depend on the set of enforcement rights within each class of creditors. We are dealing here with bondholder rights only, so, going back to the start of this section, the question is whether the shape of bondholder rights (at the bottom left of Figure 1) can have a noticeable influence on a debtor country’s decision to default (at the top), given that so many other considerations likely also play a role. Any such influence must obviously be small.

Assuming for the moment that indeed there is a deterrence effect of debt enforcement, we turn to the second question, namely whether the governance structure of a bond makes a difference for the size of that effect. In other words, when a country considers repudiating its debts, does it matter for its government to know whether it will have to face the wrath of individual bondholders or a trustee? Deterrence in this context can be formulated as the probability of legal action occurring, multiplied by the costs that such action imposes on the debtor.

The second factor is easily evaluated. When legal action does arise, it is almost certainly a greater nuisance to the debtor coming from a trustee than coming from an individual bondholder. After all, a suit brought by a trustee will typically be backed by at least 25% of the bond’s outstanding principal. It is not common for such a large share of a bond issue to be in the hands of an individual creditor.

As for the first factor, conflicting influences come to mind. At first glance, it must be that trustees stifle enforcement action. This is their stated purpose. Under a fiscal agency agreement, any bondholder

can initiate legal proceedings, and there is a well-known temptation to race to the court house, suggesting that the debtor must fear immediate and multiple lawsuits. Vulturing, in particular, is almost unthinkable under a trust structure. The vulture would have to hold an unrealistically large share of the bond issue, and even if it did, the vulture could hardly rely on the trustee to pursue the innovative strategies and swift action that is needed to turn a court judgement into cash.

At a second glance though, the answer likely depends on the dispersion of bond ownership and the nature of the creditors. Take a bond issue that is entirely held by small retail investors or passive institutional investors such as pension funds. Litigation involves returns to scale. It may be that a sufficiently large group of bondholders would favour legal action, but only if it could be channelled through a trustee. Individually, none of them have a large enough claim to make litigation worthwhile. Furthermore, a first mover problem can exist which could only be overcome by collective action. The first creditor to file a case against the debtor would provide a service to fellow bondholders by publicising information which is then freely available to the others, or by influencing public opinion, etc. But since this positive externality is absent from the private cost-benefit-analysis, the first lawsuit may never be launched.⁵³ Joint litigation through a trustee can help to overcome this collective action problem.

All of the above more or less assumes that the trustee's incentives to take action are aligned with the bondholders'. Of course they are not. This is a principal-agent relationship in which the trustee, different from US corporate trust indentures, owes no fiduciary duties to the bondholders (Buchheit and Gulati, 2009). It has no incentives to please the bondholders other than to avoid liability (Kahan, 2002) and, perhaps, to maintain at least a decent reputation. Trustee passivity is widely lamented by academics and practitioners alike.⁵⁴ Ideally, the trustee would use its discretionary power to pursue remedies against the

⁵³ This is the opposite of the 'race to the court house' argument, according to which the first creditor to sue creates a *negative* externality by reducing the chances of repayment for all other creditors. Both arguments are plausible.

⁵⁴ For example, see Goodall (1983, p.2): "[I]nvestors often complain that trustees do not act positively enough." On the practical side, Michael Chamberlin, Executive Director of the Trade Association for the Emerging Markets, said in correspondence with the author: "Trustees are notable for their caution, occasional incompetence and being subject to institutional constraints (need

defaulter without instruction from the bondholders. Given its lack of incentives, however, the trustee is more likely to grudgingly follow the bondholders' orders, which clearly diminishes the chances of success in court. Accordingly, a quick database search shows that the number of lawsuits by trustees against defaulting sovereigns is far exceeded by the number of suits from bondholders against the trustee for failing to take action. The shortcomings of trust structures were observed in practice following the 2008 Ecuadorian default, where the lack of initiative by a "bovinely passive trustee" cost the bondholders dearly (Buchheit and Gulati, 2009).

To summarise, the uncertainty persists as to whether a deterrence effect of enforcement plausibly exists and, if so, which governance structure is best suited to achieving that effect.

Bondholders' incentives: preventing excessive litigation

The governance structure of a bond should provide incentives for efficient behaviour also on the part of creditors. The foremost concern here is that, if given individual enforcement rights, bondholders may make excessive use of such rights. We proceed to consider three sources of inefficiencies: multiplicity of action, maverick litigation, and holdout litigation.

Consider first a situation in which most if not all bondholders would agree that a defaulting sovereign should be sued; the country is commonly regarded as 'fair game' (perhaps Ecuador in 2008). There is thus no conflict of interest among bondholders, so that individual enforcement rights are least likely to do harm. And yet even in this situation enforcement through a – sufficiently diligent – trustee should be the preferred option for bondholders and all other parties alike. For IERs would potentially open the door to literally thousands of lawsuits, all of which are based on the same type of claim, are accompanied by the same circumstantial facts and should therefore have the same merits in court. Such multiplicity of action would be extremely wasteful as it unnecessarily burdens the creditors, the debtor,

indemnities, may have conflicts of interest or be subject to political suasion) that make them less effective as litigants than individual holders."

and the courts. Either a class action or enforcement through a trustee can achieve a better outcome at much lower social costs.

Yet, such a uniform appetite for action will rarely occur. In the more likely event, the majority of bondholders will realize that their best bet is to hope for an acceptable restructuring offer, while a small number of creditors may be tempted to use their individual enforcement rights. Each such ‘maverick’ creditor must strive to be the first to initiate legal action, for any hesitation might enable other potential mavericks to lay their hands on the debtor’s sparse assets or give the debtor time to shield the assets from the creditors’ reach. A ‘race to the courthouse’ can be the result. Maverick litigation is almost surely socially inefficient as the individual creditor’s gains are dwarfed by the loss that accrues to the majority of creditors and to the debtor and third parties. Once legal action is pending, the debtor will experience difficulties to obtain the fresh money needed to overcome the debt crisis because investors will be reluctant to advance funds that may end up being attached by the maverick creditors. Majority creditors will not only suffer from the debtor’s impeded market access, they will also indirectly pay for the debtor’s defence against the mavericks.

Finally, ‘holdout’ litigation refers to the strategy of not accepting a restructuring offer in the hope of achieving a better outcome later. Individual enforcement rights form the basis of any such hope. Holdouts will typically retain their old bonds until a restructuring has gone through. When the sovereign is once again solvent, thanks to the debt relief granted by the majority of bondholders, the holdouts will press for full repayment by threatening or even initiating legal action. Holdout behaviour is individually rational but socially detrimental: Individual enforcement rights can create a prisoners’ dilemma situation among bondholders. The danger of preferential treatment for holdouts will reduce the mainstream creditors’ willingness to participate in a restructuring, which in turn prolongs and possibly aggravates the crisis, with negative consequences for all parties concerned. All that is needed to avoid these consequences is either the relinquishment of individual enforcement rights or the universal adoption of collective action clauses.

Bondholders' Perspective

While the above points were made primarily to show the potentially harmful consequences of IERs for general welfare, it will have become clear that such rights are likely also detrimental to the interests of most bondholders – except perhaps for the few who make use of the rights. And, as has been argued above, to pursue IERs is in practice only an option for a small subset of investors. In all of the major cases against defaulting sovereigns, the claimants were fairly large companies, institutional investors, specialised vulture funds, or all three.⁵⁵ Where enforcement of a bond is possible exclusively on an individual basis, retail investors with only a small stake in a particular country's debt are paradoxically cut off from meaningful access to enforcement measures. The Argentine default of 2002 was an exception in that it provoked lawsuits from a number of retail investors. However, as of 2006, none of the judgements that creditors were awarded had enabled them to satisfy their claims. It is particularly because of the difficulty to attach the debtor's assets that “agreeing to a reasonable restructuring offer – one that reflects the country's capacity to pay – may be the best option available to mainstream creditors...” (Sturzenegger and Zettelmeyer, 2006a, p. 31). This distribution of effective enforcement rights is on the one hand clearly unfair and on the other hand not conducive to whatever efficiency goals bond enforcement may serve.

One of the major *ex ante* justifications for IERs, their possible role in deterring defaults, has been discussed in depth above. The theoretical arguments are inconclusive; an empirical test is attempted in Hässeler (2010). But even if there were a sizable deterrence effect, it is not immediately clear why bondholders should necessarily benefit. The market will ensure that any risk differentials between bonds with different enforcement regimes will be reflected in the spreads. Thus, if collective enforcement rights were to give rise to more defaults, bondholders could expect to be compensated up to the point where they are again indifferent between holding either type of bond.

⁵⁵ Table 3.1 in Sturzenegger and Zettelmeyer (2006b) presents an overview of litigation against sovereign debtors and the associated outcomes.

Further justifications for stronger IERs can be derived from the *ex post* situation, i.e. after the debtor has declared a moratorium or has actually defaulted. Once a debtor country has made the difficult decision to default and has accepted the inevitable loss of reputation, there may be no compelling reason for it to approach its creditors to negotiate a restructuring deal, so long as the country has no immediate need for additional capital. The IMF's 'lending into arrears' policy requires the debtor to negotiate with the creditors in good faith, but this requirement is not compelling for countries that do not depend on IMF loans. The Group of Ten, in publishing their model collective action clauses, intended "to foster early dialogue, coordination, and communication among creditors and a sovereign caught up in a sovereign debt problem" (G-10, 2002, p. 1). However, such *engagement provisions*, which promised timely consultations with the debtor, were generally not adopted following the 2003 shift in market practice. So in some situations, the threat of litigation can be the only device available for bondholders to force the debtor country to the negotiating table. If nothing else, the prospect of legal battles with hundreds of bondholders should persuade the defaulting country to make a restructuring offer. Miller and Thomas (2006) highlight the function of litigation for engaging the debtor in the case of the Argentine default. In their interpretation, the court used the threat of granting attachment orders to ensure that the defaulting country negotiated in good faith with creditors.

Not only does the *timing* of the restructuring offer plausibly depend on the nature of enforcement rights, but equally the *quality* of the offer has to be seen in relation to the enforcement regime. "Litigation may also operate as a check on the terms of the proposed restructuring, giving creditors recourse against a restructuring that provides insufficient value..." (Fisch and Gentile, 2004, p. 1055). Clearly, the better the exchange offer, the less likely it is that the debtor will have to face creditor suits. A lower threshold for (individual) litigation thus translates into greater bargaining power for creditors. Accordingly, Sturzenegger and Zettelmeyer (2006a, p. 3) hypothesise that "the threat of litigation may be an obvious candidate to explain the large recovery values obtained by creditors in some recent debt restructurings..." It may of course be asked why a diligent trustee could not be just as effective as individual bondholders are in eliciting a timely and valuable restructuring offer.

Underlying all these arguments as to why strong individual enforcement rights reinforce the position of bondholders is the assumption that the threat of legal action can actually shift value from the debtor to the creditors. In other words, it must be the case that, from the bondholders' perspective, enforcement is a positive sum game; it extracts money that bondholders would not otherwise have received. The assumption thus mirrors the 'willingness-to-pay' view discussed above: Presumably the debtor country does have spare funds, it merely refuses to devote them to debt service unless forced to do so.

This view may of course be contested. Under the 'ability-to-pay' perspective, the amount available for debt service is fixed and litigation therefore results in only a costly reallocation of funds between different (classes of) creditors. A shift from collective to individual enforcement thus results not so much in a shift of power from the debtor to creditors, but rather away from an equal distribution of power among bondholders towards a situation where essentially only vultures may enjoy meaningful enforcement rights. Taken one step further, the ability-to-pay view also implies that any expenses the sovereign incurs in the defence against enforcement action are funds that then become unavailable for debt service, making enforcement a negative sum game. If this is an accurate description of reality, individual action must clearly be suppressed and it is both sufficient and efficient to vest any enforcement rights in the trustee for use in the rare case that legal action is in the bondholders' common interest.

5 – Elliott: Events and Reactions

This section sets the stage for an empirical test of market reactions to the outcome of a case that polarised opinions on individual enforcement unlike any other.⁵⁶ The settlement of *Elliott Associates v. Peru* in September 2000 is easily the most influential event in the recent history of sovereign debt enforcement. It was used by the First Deputy Managing Director of the IMF, Anne Krueger, in one of her first speeches about the Sovereign Debt Restructuring Mechanism to demonstrate the shortcomings of the international

⁵⁶ Fisch and Gentile (2004) and Sturzenegger and Zettelmeyer (2006a), amongst others, discuss the series of important court cases of enforcement against sovereign debtors which ultimately culminated in *Elliott*.

financial architecture. The case provoked diverse and strong reactions both in the media and in the academic sphere, as we shall illustrate after a brief account of the underlying events.

Course of Events

In October 1995, the Republic of Peru announced its intention to restructure defaulted commercial but officially guaranteed bank loans into Brady bonds.⁵⁷ Three months later and, more importantly, only two weeks after successful litigation by Pravin Bankers against Peru, the New York-based vulture fund Elliott Associates began purchasing a total of \$20.7 million in face value of the debt at just over 50 cents on the dollar. As the Brady exchange progressed, Elliott refused to participate and instead on October 8, 1996, filed suit against Peru and its instrumentality, Banco de la Nación, hoping to attach the collateral to be used in the exchange. However, the motion for attachment was denied.

The Brady exchange closed on March 7, 1997, backed by Peru's verbal promise that no preferential treatment would be given to holdouts. In August 1998, the New York Southern District Court ruled on renewed litigation from Elliot that the claims in question had been acquired with the intention of bringing suit, thus violating §489 of the New York Judiciary Law. This was the first time the "champerty" defence had worked for a sovereign debtor. Yet, on appeal Elliott succeeded in having the first judgement reversed. The Court of Appeals for the Second Circuit decided that the fund's primary goal was to satisfy the debt and not necessarily to litigate. The decision came with an attachment order over any commercial property held by the defendants in New York. However, this was of little value to Elliott as virtually no such property could be located within the jurisdiction.

On June 22, 2000, the Southern District Court authorised Elliott to recover a sum of more than \$55 million. While immediate attachment was impractical, the award nevertheless posed formidable problems to Peru, which was now forced to rearrange all of its financial flows to avoid interference by Elliott in

⁵⁷ A slightly more detailed account of the events can be found in Buchheit and Pam (2004).

New York. The situation was further aggravated by Elliott's successful attempts to obtain attachment orders in other financial centres.

A major opportunity for Elliott arose as Peru's Brady coupon payment date on September 7 approached. The vulture sought and received restraining orders directed against Chase Manhattan Bank, Peru's fiscal agent, as well as against three clearing houses through which Peru was going to make the payments. The sovereign was thus forced to find other routes to service its debt and in fact missed the payment date, thereby marking the start of a 30-day grace period. Consequently, the Peruvian government had to find a way to make the interest payment before October 7. Failing to meet this deadline would have implied a formal incident of default, triggering cross-default clauses which would have given Peru's creditors the right to accelerate almost \$4 billion of outstanding debt. Peru's efforts to arrange the payments through the Bank of International Settlements also remained futile.

The pace of events increased towards the end of September. On 21 and 22, two New York courts issued further restraining orders in Elliott's favour. On the latter day, Elliott also sought an injunction from the Commercial Court of Brussels to prevent the Morgan Guaranty Trust Company as operator of the Euroclear settlement system from accepting funds from Peru to be distributed to the Brady bondholders. The motion was rejected, Elliott appealed, and on September 26th, the Brussels Court of Appeals finally granted Elliott's request. Facing the imminent danger of outright default, Peru settled on September 29 for \$58.45 million. All restraining orders were lifted and the interest payments were eventually made on October 5, two days ahead of the deadline.

Reactions

The first and foremost precondition for any measurable bond market response to *Elliott* is that investors must have been instantaneously aware of the events and of their significance. To ascertain this, we ran news searches on LexisNexis Business for immediate coverage, in addition to researching the academic literature for the longer term interpretations.

Early stages

Elliott had attracted attention from academics and practitioners alike long before the actual settlement. The New York court's decision to uphold the champerty doctrine in Peru's defence generally puzzled observers, some of whom asserted that the very survival of the sovereign bond markets hinged on the creditors' ability to enforce claims acquired on the secondary market. The ruling effectively threatened to put vultures out of business. Elliott's subsequent appeal was accordingly reinforced with *amicus curiae* briefs, signalling that market participants took a very active interest in the case.⁵⁸ The reversal of the champerty ruling was, albeit with some time lag, similarly covered, the reports stressing its function as a potential precedent for other countries with pending debt problems, such as Ecuador and Russia.⁵⁹

However, despite the arguably sweeping implications of the champerty ruling and its reversal, coverage of both events was delayed and restricted to semi-scholarly publications that focused on the more general, long-term reverberations of the case. Immediate news reports are entirely lacking in the sources monitored by LexisNexis. This fits well with the fact that neither event was accompanied by any significant abnormal returns on the Peruvian bond index. Nor was there any effect on Ecuador, the country that was most likely to be affected by legal proceedings relating to its neighbour's debt problems. We eschew the detailed results of these tests as the focus shall be on the settlement. Suffice it to say that the methodology used is essentially identical to the one described in the next section.

Settlement

Peru's failure to make the scheduled interest payments on September 7, 2000, marked the start of the final phase of the legal struggle with Elliott Associates. This seemingly important event escaped the news. On September 19, Moody's and Standard & Poor's lowered the Peruvian credit rating, citing the missed interest payment and political tensions, respectively (more on the latter below). At least two sources

⁵⁸ Glenn E. Siegel and Lynn M. Ryan in the April 1999 edition of *The Metropolitan Corporate Counsel*.

⁵⁹ "Peru Case a Warning for Ecuador" *Emerging Markets Debt Report*, November 01, 1999.

reported the downgrade the next day.⁶⁰ The subsequent milestones of the case, including Elliott's success before the Brussels court on September 26, once more failed to be reported in the press. All of 82 words were finally devoted to the settlement on September 29.⁶¹ Fuller Reports (in the *Wall Street Journal*) were not available until the next trading day, October 2. The resumption of interest payments on October 5 again took five days to be reflected in the news, according to the LexisNexis sources.

We thus note that it was indeed possible for any dedicated investors to hear of the settlement on the day it occurred. The scarcity of the coverage is, however, quite surprising, given the repercussions which the outcome of the case had, as depicted in the next section.

Aftermath

Though it seems that *Elliott* registered with the wider public only gradually, when it did, some dramatic reactions could be witnessed. It provoked an outcry from Jubilee 2000, an international organisation promoting relief for highly indebted countries: "These people are trading in human misery. Elliott Associates, L.P., are picking over the bones of the Peruvian economy like a pack of vultures."⁶² According to Sturzenegger and Zettelmeyer (2006a, p. 27), the case "led to much consternation in policy circles." The British Prime Minister Gordon Brown later spoke of a "perversity" and a "morally outrageous outcome".⁶³ Anne Krueger made the case one of the bases of her calls for a Sovereign Debt Restructuring Mechanism. She "denounced the fund, alleging that it has undermined the entire structure of sovereign finance."⁶⁴

⁶⁰ The *Houston Chronicle* and the *Wall Street Journal*, both on September 20. Futher coverage on September 22.

⁶¹ "Peru to Fork Over \$58 Million to Elliott Associates to Avoid Default" *Hedgeworld Daily News*, September 29.

⁶² Quoted in Alfaro et al (2007, p. 22).

⁶³ *ibid*, p. 1

⁶⁴ Salmon, F. (2004) "Elliott Associates' aggression captures low-risk returns" in *Euromoney*, available at www.euromoney.com/Article/1001988>Title.html

By contrast, the investor community seems to have welcomed the settlement with a measure of glee, or even malicious joy. An article in the BradyNet forum⁶⁵ regarded Elliott's victory as an event that "gave power back to creditors" after "creditors have been beaten up recently". Furthermore, the "Elliott case is now seen giving investors more faith in the legal system" and, "it's a situation where the legal rights of creditors were reaffirmed".

Interpretations in the academic literature have tended to be somewhat more nuanced. While Scott (2006, p. 15) describes the decision as "the high water mark of creditor rights", other authors regard it as a mixed blessing for creditors, not to mention the effects on the interests of other parties. The Brussels decision was seen as "a windfall to holdout creditors [but it] harms the majority of other creditors" (Gulati and Klee, 2001, p. 6). Many at the time furthermore regarded *Elliott* as threatening future sovereign debt restructurings or even the survival of the entire emerging market debt business.⁶⁶

The outcome was experienced as "both unexpected and seismic" (Bradley et al, 2008, p. 4) because Elliott had successfully pursued a new legal argument in conjunction with a novel practical strategy to force Peru to settle. The fund had interpreted the *pari passu* clause in the underlying debt instrument to mean that it required Peru to make payments to all its foreign creditors on a ratable basis. In other words, Elliott demanded that no interest payments be made to Peru's Brady creditors unless the vulture's claims were satisfied at least proportionally. This reading of the clause, which is routinely included in international unsecured credit contracts but had never before played a role in sovereign debt litigation, was at odds with the traditional interpretation, according to which the clause merely prohibited Peru from subsequently issuing debt that is senior to the instrument in question. Surprisingly, the Brussels courts accepted Elliott's interpretation.

It is this unusual reading of the contract terms, and the courts' willingness to go along with it, that enabled Elliott to obtain injunctions against whichever banks and institutions Peru hastily tried to arrange

⁶⁵ The article is available at www.bradynet.com/bbs/latam/100069-0.html

⁶⁶ See Bradley et al (2008), Gulati and Klee (2001), and Sturzenegger and Zettelmeyer (2006a), amongst others.

the Brady interest payments through. This new strategy of holding hostage the debtor's relations with its other creditors proved much more successful than the traditional path of attempting to attach the debtor's assets, a strategy which the vulture had pursued unsuccessfully in the earlier stages of the case. It thus appeared that *Elliott* had created "an almost foolproof enforcement channel, since it effectively gave holdouts a veto over the regularization of a country's relations with mainstream creditors, and hence over its return to international capital markets" (Sturzenegger and Zettelmeyer, 2006a, p. 28).

However, doubts soon arose as to how strong a precedent the case was going to be. Elliott's success clearly hinged on the peculiar *pari passu* ruling, and commentators soon speculated that that 'ratable payments' interpretation would not stand up to future scrutiny by the courts. Gulati and Klee (2001, p. 5) argue that "the Brussels court's interpretation was wrong and should be disregarded." Buchheit and Pam (2004) share their discomfort with the decision. And indeed, in 2004, the very same Brussels Court of Appeals refused to interfere with Euroclear's operations in a case of debt enforcement against Nicaragua. The following year, new legislation in Belgium put a definite end to the (ab-) use of settlement systems for debt enforcement (Scott, 2006).

Testable Hypotheses

We note some key points from this section to form the basis of the empirical analysis that follows.

First, the sovereign bond investment community had opportunity to be aware of the *Elliott* settlement on the day it occurred, even though one might have expected much broader news coverage, given the importance of the case. The events leading up to the settlement were sparsely if at all reported.

Second, the settlement undoubtedly constituted a boost to individual enforcement rights, though there was uncertainty regarding the strength of the precedent. So one might expect to observe a market reaction in the form of a movement in bond prices – not just for Peru but for any country for which *Elliott* could at some point become relevant, in other words any country that had a significant probability of

default at the time. Any such movement will likely be instantaneous, i.e. occurring on the day of the event or perhaps on the next trading day.⁶⁷

Third, it is unclear how the market will evaluate such a strengthening of IERs at the expense of mainstream creditors. The reactions in the press and in the academic literature were in line with our theoretical reasoning that *Elliott* was probably good news for a very small section of the investment community – would-be holdouts – and something of a threat for all other parties concerned, including the vast majority of bondholders. The question is how this dichotomy is reflected in an aggregate market reaction. In other words, we feel that if *Elliott* was as influential as has been claimed, there should be abnormal returns following the settlement, but we have no priors about the sign of those returns.

6 – Empirical Evidence

Methodology

Introducing dummy variables for the settlement day and other important events of the Elliott case, we test for abnormal daily percentage changes in a sovereign bond index of Peru and, towards the end of the section, a selection of other potentially affected countries. The time series covers the three-year period 01/01/1999 to 12/31/2001 and is thus roughly centred on the settlement date. This yields around 780 daily observations.

Dependent variables

We primarily rely on percentage changes in J.P. Morgan's Emerging Markets Bond Index Global for Peru (R_JPMG_PERU)⁶⁸ as the dependent variable. (Hereinafter, series preceded by "R_" denote variables

⁶⁷ Grande and Parsley (2005) study the effects of a rating downgrade for one country on the sovereign bond spreads of other countries. They find significant news spillovers *on the same day*.

⁶⁸ The construction of the index is described in Kim (2004).

measured as percentage changes, or returns, whereas series without the prefix will refer to levels.) J.P. Morgan's family of indices is a common choice in the literature, though most studies choose the spreads version, rather than total returns. We pick the latter because total returns translate directly into changes in the underlying assets. We are thus testing whether the *Elliott* events had instantaneous effects on the value of a broad portfolio of Peruvian sovereign bonds. In alternative specifications and as a robustness test, R_JPMG_PERU is replaced with R_BRADY_PERU, Barclay's Emerging Markets Brady Bond Index for Peru. The Brady bondholders were most directly affected during the final week of the legal proceedings as it was their interest payments that the vulture blocked to satisfy its claims. They resemble perhaps most closely what was referred to in the theory section as 'mainstream creditors' – passive bystanders who have no immediate benefit from the individual enforcement action but who are liable to suffering collateral damage. If there was to be any market reaction to *Elliott*, it would show in the Brady bonds.

Finally, following the hunch that an individual bond is perhaps more likely to exhibit abnormal returns than an index, we use as an alternative dependent variable the returns on a 20-year Peruvian bond that was issued on March 7, 1997. The variable shall be referred to as R_603345_PERU, the number being the security's identifier on Thomson Reuters' Datastream service. This is a random choice from the small set of securities that traded at the time of the settlement and have not yet matured, so that historical prices are easily available.

Controls

The bulk of the variation in the Peruvian indices is captured by the returns on J.P. Morgan's Emerging Markets Bond Index Global for Asia (R_JPMG_ASIA), which is used to control for factors that influence sovereign bond markets globally. The important assumption here is of course that JPMG_ASIA is truly exogenous with respect to the event dummies; in other words, *Elliott* did not cause any movements in the Asian index. This appears to be justified for two reasons. Empirically, JPMG_ASIA does not exhibit any unusual returns on the relevant dates. And theoretically, if *Elliott* had an impact on other countries' debt,

this impact should be strongest for countries that were at the time subject to vulture activity. None of the countries covered by the Asian index were.

To control for variations in the risk-free interest rate, we calculate daily returns on a 30-year US Treasury Bond, which was issued on November 15, 1998 (R_UST). Macroeconomic developments in Peru are proxied by the absolute values of the Peruvian Nuevo Sol's exchange rate relative to the Dollar (PEN). PEN performs surprisingly well, considering that the exchange rate was a managed float at the time. The final 'standard' control variable is, again in line with Moser (2008), the Volatility Index (VIX) that is published by the Chicago Board Options Exchange. The index is considered an important measure of general market sentiment, or 'investor fear gauge'. About four percent of the VIX values were missing; these were filled in using the average of the values preceding and following the gap. There are, however, no gaps in the period we study most closely.

An additional set of control variables is necessitated by the specific political situation in Peru around the time of the *Elliott* settlement. The events in court almost coincided with the "most serious political crisis in a decade"⁶⁹ in Peru. Late on September 14, 2000, a video was broadcast on Peruvian national television that showed Vladimiro Montesinos, head of the national intelligence service and right-hand man of the Peruvian President Alberto Fujimori, handing over a bribe of \$15,000 to an opposition congressman for his defection to Fujimori's party. The resulting public outrage forced Fujimori to announce on September 16 elections for the next year in which he would not stand again for President. Shortly afterwards, Fujimori fled the country and was impeached by Congress. The political crisis can quite clearly be expected to impact on bond values. "The increased political uncertainty will depress investment, raise financing costs, and slow the economy", commented the deputy head of the sovereign ratings group at Standard & Poor's.⁷⁰ Furthermore, a change of government is always associated with the risk that the new administration will use the opportunity to repudiate old debts.

⁶⁹ *Euromoney*, October 2000, issue 378, p. 20.

⁷⁰ "Credit firms lower rating on Peru debt" *The Houston Chronicle* on September 20, 2000.

In a regression, the bond market effects of the political situation can be expected to crowd out much of any *Elliott* effect, unless the former are properly controlled for. To proxy for the degree of political uncertainty we count the number of news results per trading day on LexisNexis Business for various sets of search terms.⁷¹ The rationale is that bad news is more readily reported than good news, so one would expect large numbers of hits to be associated with negative bond returns. An alternative but equivalent reasoning might hold that news fundamentally denote change, and change is bad for risk-averse investors.

Several queries of the form “Peru AND [...]” were tested. For some, the number of results was so large that the output became unmanageable. Others were only weakly correlated with the dependent variables. In the end, two queries appeared suitable on both accounts: TROUBLE and CRISIS. Figure 2 graphs the monthly aggregates of the two queries.

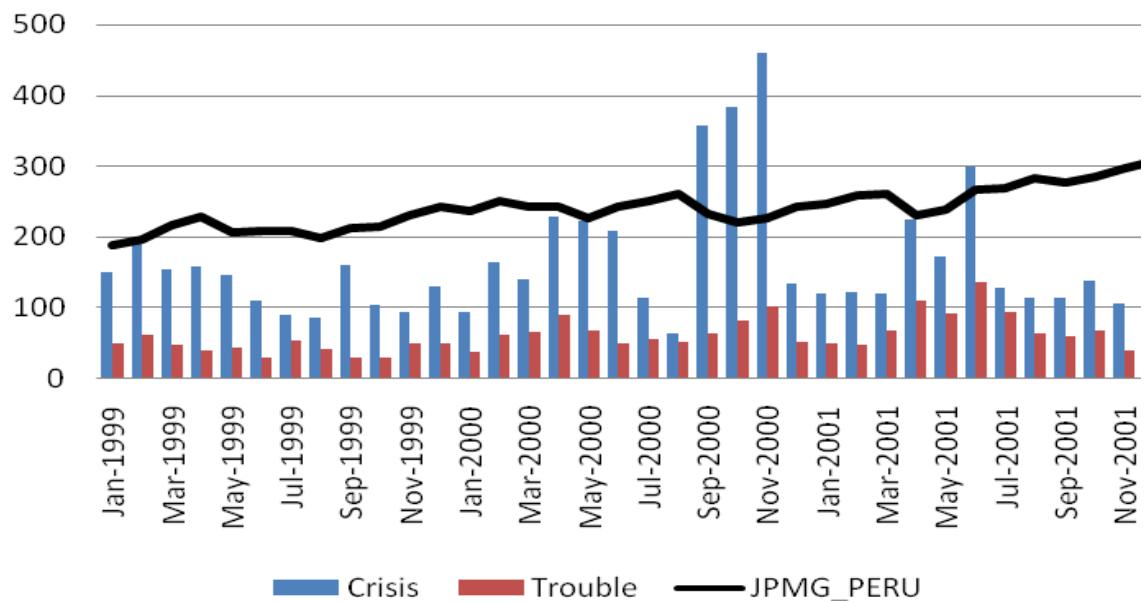


Figure 2: Monthly number of search results for two news queries and end-of-month values for JPMG_PERU

⁷¹ Many thanks to Jonathan Klick for suggesting this approach.

The series are primarily intended to capture the effects of the political turmoil in September 2000 but were nevertheless calculated for the whole sample period. Both series of course include news items that are utterly unrelated to the sovereign debt situation in Peru. Such noise does not pose a problem as long as the share of articles that are related to the dependent variable is roughly constant over time. The series are evidently correlated, though not so strongly as to suggest that they could not be used as controls simultaneously. Superimposing the line for JPMG_PERU onto the news counts, we see the expected tendency for the bond index to fall in times of ‘crisis’ and ‘trouble’. The graph also nurtures the idea that changes in the level of news coverage might be a better predictor for the dependent variable than the levels themselves.

A preview

Figure 3 shows an enlarged view of the Peruvian bond index for September 2000. All values are scaled so that the index starts at 100 on September 1. Events that were important to the political climate in Peru and to the final stages of the *Elliott* case, respectively, are marked by vertical bars.⁷² The intention is to provide a graphic approach to gauging the bond market effects of *Elliott*, as an alternative to the regression analysis below.

The line for JPMG_PERU declines steeply at the time of the two political events, both of which could be expected to be bad news for bond markets because they heralded change. By contrast, the debt-related events occur at times when there is hardly any bond index movement – with one exception: Surprisingly enough, JPMG_PERU rose markedly following the downgrade by the two major rating agencies. Most notable, though, is of course the fact that the index line is flat on the settlement day. Whether or not the slight appreciation over the next few days can be attributed to *Elliott* is unclear.

⁷² The video that revealed the bribery scandal was shown late on September 14, long after bond markets had closed and the index had been calculated for that day. The event was reported in the news, and is therefore marked, on September 15. Similarly, new elections were announced on Saturday, September 16, but the event is marked on the next trading day, September 18.

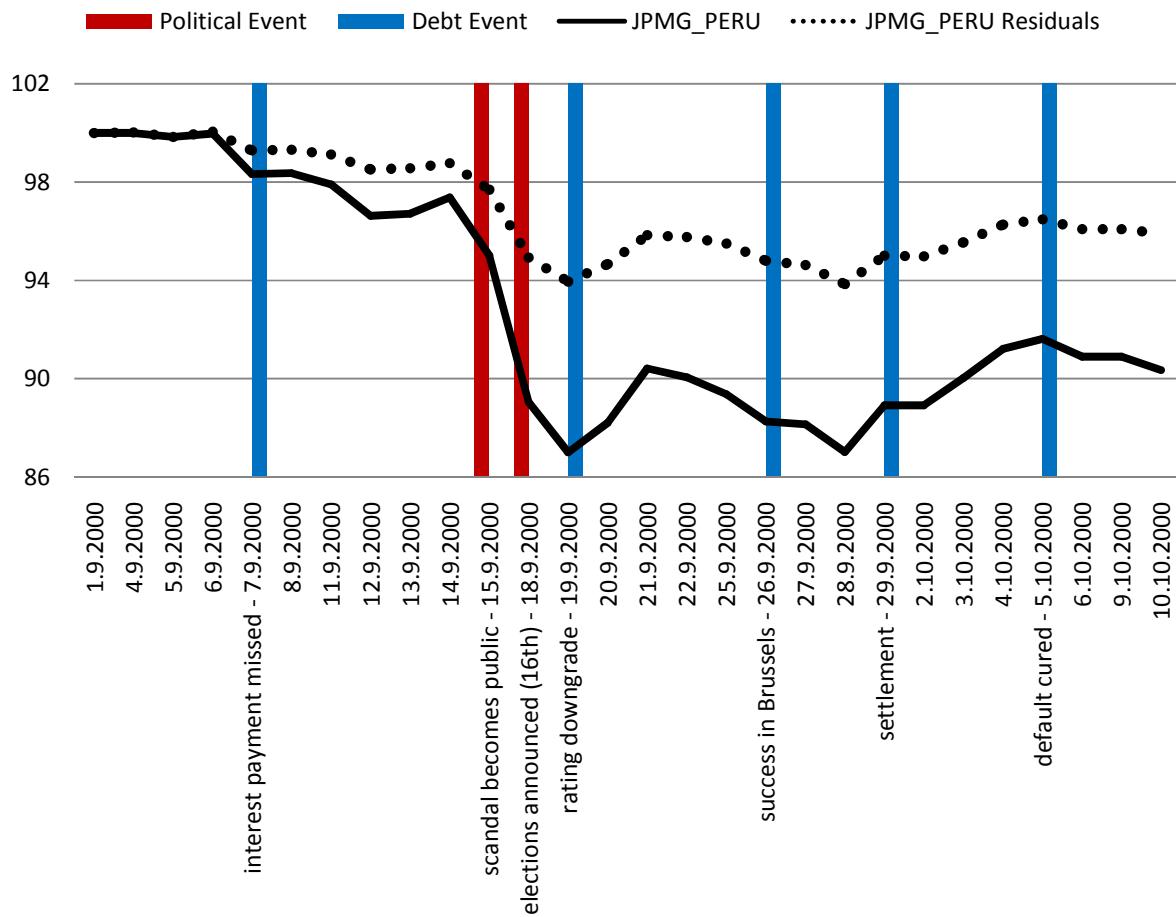


Figure 3: Index of JPMG_PERU before and after ‘removing’ the influence of political and market events

The dotted line, finally, is a graphic representation of the regression output. It is constructed by multiplying the starting value of 100 consecutively by the sum of 1 plus the residuals from model 1 below. The result is a bond index that is stripped of the influences of the control variables, at least to the extent the regression is able to capture them. ‘Holding constant’ the amount of news coverage, amongst other things, indeed has the effect that the dotted line declines less dramatically following the two political events. Apart from that, however, it follows the solid line almost in lockstep. Reducing the influence of other factors does not serve to make the effects of events related to *Elliott* any more visible. The graphic inspection thus provides no convincing evidence that *Elliott* had a noticeable impact on the Peruvian bond market.

Quantitative Results

The model for the Peruvian bond index that is ultimately used to check for abnormal returns in response to the settlement and other important events will take the form

$$R_{JPMG_PERU_t} = c + \alpha * \Delta_t + \beta * \Omega_t + \delta \Sigma + \varepsilon_t,$$

where Δ is a vector of bond market-related variables and time series derived from them, Ω is a vector of variables that are based on the news queries, Σ is a set of dummy variables for the events, and ε is an error term of the usual description.

We approach the full model by first of all trying out various specifications of the controls to form a baseline model. There is no harm in such data mining as long as it is done without prejudice to the true variables of interest (the events). Since the aim is just to explain as much as possible of the variation in R_{JPMG_PERU} , and since there is little theory to inform the specification of the model, the strategy was to start by including all potential controls in various functional forms, and then to eliminate those whose estimated coefficients are not significant at the 10% level. The results are presented as model 1 in Table 2.

The initial OLS estimates are not particularly noteworthy. The model is free of serial correlation, given the Durbin-Watson statistic which is almost 2. It appears, however, that heteroskedasticity is a problem. With White's test statistic at $F=3.45$ we must reject the hypothesis that the error variance is constant across time. This is most likely due to the fact that the model predicts R_{JPMG_PERU} relatively well in quiet times while the variance of the residuals is much larger in times of turmoil. In consequence, we cannot rely on the OLS estimates of the coefficient variances.

The standard cure for heteroskedasticity is weighted least squares (WLS). In this context, a special form of WLS, feasible generalised least squares (FGLS), turns out to be useful because we then do not need to assume a particular form of heteroskedasticity. It attaches a weight of $1/\exp(\hat{u}_t)$ to each observation, where \hat{u}_t are the predicted values from a regression of the squared and logged residuals from

the original OLS equation on the control variables. FGLS estimators are asymptotically normally distributed, so the standard coefficient tests apply. The results are displayed as model 2. Compared to model 1, a slightly different set of controls now yields statistically significant coefficients. The refined estimation method reassuringly yields roughly similar estimates and no sign changes. Evidence of heteroskedasticity is now reduced to the 10% level, which seems acceptable. Removing a few of the largest outliers would further reduce the test statistic.

	Model 1	Model 2	Model 3
Dependent variable	R_JPMG_PERU	R_JPMG_PERU	R_JPMG_PERU
CONSTANT	0.168*** (0.064)	0.373* (0.222)	0.412** (0.221)
R_JPMG_ASIA	1.083*** (0.152)	0.853*** (0.165)	0.82*** (0.165)
CRISIS	—	0.047*** (0.017)	0.046*** (0.018)
CRISIS^2	—	-0.001* (0.001)	-0.001* (0.001)
D(CRISIS)	-0.02*** (0.005)	-0.018*** (0.007)	-0.018** (0.007)
TROUBLE	-0.116*** (0.025)	-0.03* (0.017)	-0.029* (0.017)
TROUBLE^2	0.011*** (0.002)	—	—
R_UST	-0.102* (0.058)	-0.136** (0.061)	-0.139** (0.061)
D(PEN)	78.113*** (30.064)	46.233* (25.327)	47.547* (25.25)
VIX	—	-0.02** (0.009)	-0.021** (0.009)
D(VIX)	-0.136*** (0.028)	-0.113*** (0.023)	-0.114*** (0.023)
D_07_09_10	—	—	-1.708* (0.915)
P_15_09_00	—	—	-2.472** (1.12)
P_18_09_00	—	—	-5.74** (2.495)
D_19_09_00	—	—	-1.752 (3.243)
D_26_09_00	—	—	-1.473 (2.216)
D_29_09_00	—	—	2.109 (1.622)
D_05_10_00	—	—	0.358 (0.853)
Method	OLS	FGLS	FGLS
Observations	780	780	780
Adj. R^2	0.161	0.09	0.1
Durbin-Watson stat.	1.946	1.958	1.963
White F-test for heteroskedasticity	3.45***	1.339*	1.108

10%-level (*), 5%-level (**) and 1%-level (***) level of significance, two-tailed test. Standard errors in parentheses.

Table 2: Regression results for R_JPMG_PERU

Model 3 finally introduces a set of dummy variables, one for each of the events marked in Figure 3. Each dummy has only a single observation that is equal to one (on the relevant date), all other values are zero. This is a convenient way of checking for abnormal returns. The variables are named after the date in question, preceded by a “D” if the event is related to debt issues or a “P” if the event is political in nature.

The introduction of the dummies leaves the incumbent coefficients largely unaffected. With $F=1.108$, all evidence of heteroskedasticity has now disappeared. The estimated coefficients on the event dummies confirm the graphical impression from Figure 3. Both political events are associated with significant negative abnormal returns. The same is not true for the debt-related events, with the exception of September 7, when the missed Brady interest payment was accompanied by a negative return which is significant at the 10% level. Remarkably, the return to normal debt service four weeks later does not appear to have been acknowledged by the bond markets. The downgrade (September 19) and favourable decision in Brussels (September 26) likewise went essentially unnoticed. The settlement on September 29, our main point of attention, coincides with a positive but insignificant abnormal return. This is despite the allegedly sweeping implications of Elliott’s success and despite the fact that at least rumours of the settlement were in circulation on that day, as shown in the press review. This pattern of significant effects of the political events coupled with a lack of significant abnormal returns on the settlement day persists across a range of specification changes, including the neutralisation of all outliers whose residuals exceed three standard errors of the regression and the exclusion of the relatively weak controls CRISIS² and TROUBLE.

Changing the dependent variable constitutes perhaps the strongest robustness check. This is done in models 4 and 5 in Table 3.⁷³

⁷³ R_BRADY_PERU and R_603345_PERU are correlated with R_JPMG_PERU at the level of $r=0.775$ and $r=0.671$, respectively. So while the two alternative dependent variables are conceptually very similar to the initial index, they are statistically sufficiently different from it for a meaningful robustness test.

	Model 4	Model 5	Model 6
Dependent variable	R_BRADY_PERU	R_603345_PERU	R_JPMG_ECUADOR
CONSTANT	-120.9*** (41.82)	0.312** (0.123)	0.837** (0.373)
R_JPMG_ASIA	0.575*** (0.108)	0.784*** (0.161)	1.078*** (0.239)
R_JPMG_ASIA^3	—	0.203* (0.109)	—
CRISIS†	—	—	0.019** (0.008)
D(CRISIS)	-0.015*** (0.004)	-0.01* (0.005)	—
D(CRISIS)^2	-0.0004*** (0.0001)	—	-0.0008** (0.0004)
TROUBLE	-0.088*** (0.02)	—	—
TROUBLE^2	0.011*** (0.001)	—	—
R_UST		—	-0.199** (0.091)
PEN	831.3*** (285.1)	—	—
PEN^2	-1426*** (485.8)	—	—
VIX	—	—	-0.038** (0.015)
VIX^2	—	-0.0004** (0.0002)	—
D(VIX)	-0.09*** (0.022)	—	-0.181*** (0.044)
P_18_09_00	-4.943*** (0.814)	-5.856*** (1.053)	-4.597*** (1.628)
D_29_09_00	1.949** (0.808)	1.043 (1.045)	0.358 (1.625)
Method	OLS	OLS	OLS
Observations	780	780	780
Outliers omitted	15	13	10
Adj. R^2	0.133	0.108	0.065
Durbin-Watson stat.	1.9	2.085	1.999
White F-test for heteroskedasticity	0.875	1.128	0.79

10%-level (*), 5%-level (**) and 1%-level (***) level of significance, two-tailed test. Standard errors in parentheses. † CRISIS refers to the number of query results for “Peru AND Crisis” in models 4 and 5, and “Ecuador AND Crisis” in model 6.

Table 3: Regression results with alternative dependent variables for Peru and Ecuador

Model 4 examines J.P. Morgan’s Brady index. The bonds comprised in this series are a subset of those in the JPMG. As before, the data are plagued by a non-constant variance of the residuals. Unlike in the previous model, however, FGLS turns out not to be an effective remedy. Instead, we opt for the elimination of some of the largest outliers, which we define as observations whose residuals are larger in absolute terms than three standard errors of the regression. This definition yields around a dozen outliers in the different regressions, just as one would expect, given the sample size and an assumed normal distribution of the error term. The exact numbers are indicated in the table.

The estimation strategy in terms of which variables to include is the same as before, except that now only dummies for the two most notable events are reported: the full realisation of the political scandal on September 18 and the settlement on September 29.

The Brady index in fact appreciated markedly on the settlement day. The abnormal return is significant at the 5%-level of confidence. This result conforms to our priors: If any group of market participants was to benefit from the settlement, it would be the Brady bondholders. The most straightforward interpretation of the result is that the said investors welcomed the settlement because it signified that normal debt service could resume; it meant the end of a situation in which the Brady interest payments were held hostage by Elliott Associates. The alternative interpretation, namely that the Brady bondholders celebrated the settlement as a victory for individual enforcement rights, seems remote by comparison.

Model 5 presents the final glance at bond returns in Peru. The randomly selected individual bond ‘603345’ experienced, as in all preceding regressions, a sharp decline on September 18. By contrast, the settlement date is not associated with any significant abnormal returns in this regression. The results of a further regression with the level of JPMG, rather than percentage changes, as the dependent variable are not reported because we were unable to overcome the problem of heteroskedasticity by any of the standard means. Suffice it to mention that the equation yields a negative coefficient on the settlement day.

Other Countries

As argued before, if *Elliott* was the key impetus to individual enforcement rights some say it was, the event should have had repercussions in the bond markets of other countries besides Peru. In particular, the settlement is most likely to have had implications for countries which were at the time associated with a considerable default risk. To countries for which default was inconceivable, *Elliott* was a non-event.

We consider for the analysis all countries that either defaulted during the period 1998 to 2004, as listed by Sturzenegger and Zettelmeyer (2006b), or were subject to vulture action where the filing and / or settlement date fell into the period 1999 to 2001, as listed by Alfaro et al (2007). Limited data availability

posed the next obstacle. Not all countries that qualified according to the initial criteria are sufficiently active borrowers in the bond markets and thus do not boast national bond indices. Moreover, the bonds of some of the sovereigns that do have indices are so thinly traded that the resulting returns are not suited to daily analysis. In the end, we are able to examine indices for Ecuador, Uruguay, Argentina, and Russia.

Where necessary, the problem of heteroskedasticity is overcome in the same way as above, through the elimination of outliers, again as defined above. The news queries were adapted to each country as seemed appropriate and practical. CRISIS and TROUBLE work for Ecuador and Uruguay just as they do for Peru. For Russia, however, the number of hits for these search terms would have been unmanageable. Instead we ran the query “Russia AND Crisis AND Instability”. For Argentina, none of the previously used queries proved to be significantly correlated with the dependent variable. Once again, the many different specifications were tried out *before* the settlement dummy was introduced into the equation so that there can be no suspicion of prejudice against the main results.

Ecuador, Peru’s neighbour country, suggests itself as a starting point. The country was the first ever to default on Brady bonds in 1999. On August 18 of the following year, a restructuring offer passed with an acceptance rate of 97%, helped along by the first use of so-called exit consents in sovereign bonds (Buchheit and Gulati, 2000). The restructuring process was accompanied by enforcement action from several vultures, some of whom retained a share of the 3% of old bonds that remained outstanding after the exchange, less than two months before the *Elliott* settlement.⁷⁴ Ecuador is thus the ideal testing ground for any effects of *Elliott* on other countries. Model 6 in Table 3 presents the OLS estimates. Ecuador’s adoption of the US dollar in early 2000 sadly implies that the exchange rate cannot be used as a control variable. A point of interest is that the political turmoil in Peru around September 18 was also strongly felt in Ecuador. JPMG_ECUADOR fell by almost as much as JPMG_PERU. The settlement, by contrast,

⁷⁴ See, for example, *Manchester Guardian Weekly*, November 1, 2000: „Hedge fund vultures find rich pickings“; *Latin Trade*, March 2000: "Carrión at Ecuador's Gate: The International Monetary Fund and bondholders flex their muscles over the developing country's debt"; *The Miami Herald*, August 12, 2000: "Ecuador's creditors deciding whether to restructure its debt again"

is associated with only the weakest abnormal return. This latter result persists also in the analysis of the other three countries, as summarised in Table 4.

	Model 7	Model 8	Model 9
Dependent variable	R_BARCL_URU	R_JPMG_ARG	R_JPMG_RUS
CONSTANT	-0.058 (0.044)	0.006 (0.021)	0.05 (0.065)
R_JPMG_ASIA	—	0.894*** (0.0937)	—
R_JPMG_LATIN	—	—	0.874*** (0.083)
D(R_JPMG_LATIN)	—	—	0.019* (0.008)
R_JPMG_RUSSIA(-1)	—	—	0.102*** (0.038)
CRISIS	0.017** (0.008)	—	—
CRISIS_INSTABILITY	—	—	0.038*** (0.014)
R_UST	0.383*** (0.043)	-0.095*** (0.036)	—
D(VIX)	—	-0.106*** (0.016)	-0.086*** (0.032)
D_29_09_00	0.09 (0.842)	0.035 (0.48)	-0.747 (1.115)
Method	OLS	OLS	OLS
Estimation period	full period	2/1/1999 - 2/28/2001	6/1/1999 - 12/31/2001
Observations	781	543	675
Outliers omitted	—	9	—
Adj. R^2	0.095	0.163	0.261
Durbin-Watson stat.	2.018	1.963	1.994
White F-test for heteroskedasticity	0.873	1.207	0.761

10%-level (*), 5%-level (**) and 1%-level (***)) level of significance, two-tailed test. Standard errors in parentheses.

Table 4: Regression results for Uruguay, Argentina, and Russia

Uruguay defaulted in 2003. It was thus a potential target for vultures already in the period 1999 to 2001, though there are no reports of actual vulture activity. The Uruguayan Peso was pegged to the US dollar during much of the estimation period so that the exchange rate once more cannot serve as a control variable. The results suggest that the Uruguayan sovereign bond markets took no notice of the settlement on September 29; Barclay's Emerging Markets index showed hardly any movement. Abnormal returns for September 18, the political event, are no longer reported because they are negligible in all the regression of Table 4.

Argentina famously defaulted in 2001 and it was subject to literally hundreds of creditor lawsuits during the relevant period (Sturzenegger and Zettelmeyer, 2006a), making its bond index a particularly valuable object of study. The default in 2001 also meant, however, that the Argentinean bond index began to fluctuate more and more wildly, thus becoming essentially unpredictable, as the country approached financial hiatus. In early March of that year, the Finance Minister resigned, fuelling uncertainty about the country's economic future. A bank run began around the same time. The president of the central bank was replaced the following month. At the other end of the estimation period, in January 1999, Brazil devalued its currency, which sharply damaged neighbouring Argentina's exports. Both sets of events gave rise to such volatility in the Argentine bond index that we decided to restrict the estimation period to times of 'normal' market activity, i.e. February 1999 to February 2001. The results are easily summarised: Like Uruguay, Argentina experienced an almost zero abnormal return on the settlement day.

Russia, finally, defaulted in 1998 amidst signs of vulture activity, including as potential litigants the Dart family, who had launched spectacular litigation against sovereign borrowers before.⁷⁵ In the period that followed, Russia was still potential prey to vultures, considering the continued uncertainty about the country's financial future. The fact that the estimation period overlaps with the aftermath of the Rouble crisis, which had erupted on August 17, 1998, means that once more the dependent variable exhibits too much volatility in the first half of 1999 to allow for meaningful estimation. We thus only use data from June 1999 onwards. Model 8 shows that the returns on Russia's bond index are best approximated by an AR(1) process as the residuals from an equation without the lagged dependent variable suffer from serial correlation. The Rouble exchange rate proves not to be a significant factor in explaining R_JPMG_RUS. The regression replaces JPMG_ASIA with the Latin America equivalent (JPMG_LAT) to avoid issues of endogeneity. As in all regressions with the sole exception of the Brady index, Russian bonds were not significantly affected by the settlement. The estimated coefficient is in fact negative.

⁷⁵ *The St. Petersburg Times*, June 8, 1999: "Who Is Kenneth Dart?"

7 – Conclusion

This paper has defined individual enforcement rights in relation to a sovereign bond's governance structure (trustee versus fiscal agent) and the presence of collective action clauses. Both contractual features have been the subject of reform proposals. For the sake of these reforms it is imperative to develop a comprehensive view of IERs.

A review of the applicable welfare-theoretical considerations has left us sceptical of IERs: At best, they are superfluous because the only weighty argument in their favour, deterrence of default, does not appear to have much sway. At worst, they are harmful, not least because of the well-known problems of maverick and holdout litigation. From the perspective of bondholders, IERs result in an unequal distribution of power as retail investors are effectively denied access to legal remedies. Collective action is a fairer and probably more efficient defence against defaulting sovereigns.

We then used *Elliott Associates v. Peru* as a case study to test the market reaction to an event which undisputedly reinforced IERs. The bond indices of Peru, as well as of other potentially affected countries, generally did not exhibit significant abnormal returns on the settlement day. The sign of the coefficient even switches in two of the specifications. The simplest interpretation of this lack of effects is that *Elliott* was not as important to the markets as subsequent scholarship would have us believe. Such indifference would also fit well with the surprising scarcity of timely coverage in the global media. An alternative interpretation is that *Elliott* did stir up sentiments about IERs but that the trading reactions of opponents and proponents roughly cancelled each other out. In that case, we should expect to observe a significantly larger bond trading volume around the settlement date. This is an interesting question for future research.

The most pressing need for further research, however, relates to the optimal design of trust structures so as to assure their effective operation. Our analysis has for the most part assumed that trustees always act in the best interest of creditors. Recent events in Ecuador have taught us otherwise.

Besides the contractual design, we are also concerned about the political viability of ubiquitous trust structures. If collective action is preferable also from the perspective of bondholders, as the analysis has

suggested, it may be asked why support for trust structures can be heard exclusively from academia and from international financial institutions. Public choice theory may help to explain this puzzle. The negative externalities of individual litigation are borne by a large group of bondholders and are therefore not material to any of them. The benefits, by contrast, accrue almost exclusively to the plaintiff, typically vulture funds whose survival may depend on their lobbying for the preservation of IERs. It is thus no surprise that the membership of EMTA, a creditor representative organisation that has taken an active role in the reform debate, is comprised solely of institutional investors. Elliott Associates is one of them.

We thus conclude that past and potential future resistance against collective action from investors is largely unrepresentative and should therefore not stand in the way of financial market reform. Other financial centres should follow the example of the London Stock Exchange and make the appointment of a trustee a listing requirement. At least the institutions should be in place to allow for future orderly sovereign restructurings, in which the borrowing country can and must negotiate with all of its creditors on an equal footing. But of course getting the preconditions right is no guarantee against politically-motivated bailouts, as in the recent case of Greece. Moreover, further research is needed to better align the incentives of trustees with the interest of the bondholders they are to represent.

Trustees versus Fiscal Agents and Default Risk in International Sovereign Bonds

Sönke Hässeler

Abstract

Over the last ten years, organisations such as the IMF have launched several initiatives to change market practice with respect to sovereign bond contract drafting to ease restructuring after defaults. The first of these, the universal adoption of collective action clauses, was embraced by the market after some hesitation. Another proposal - the more widespread appointment of trustees to represent bondholders in times of crisis, to centralise enforcement action against the debtor and thus to facilitate debt relief - has so far failed to have the desired impact. Amongst other potential reasons for this failure, the argument has been made that to vest enforcement rights in the trustee, as opposed to individual bondholder rights, would be to reduce the deterrence against opportunistic defaults and thus to exacerbate moral hazard. Using a sample of secondary market bond spreads and information on default status, this paper assesses empirically whether sovereign bonds issued under a trust structure indeed carry a higher default risk. It finds no systematic evidence of either a spread premium or higher actual default rates for bonds with collective enforcement rights.

Keywords: trustee; fiscal agent; sovereign bonds; default; moral hazard; collective action clauses

JEL code: F34; K12; K33

1 – Introduction

At the turn of the century, sovereign bond markets were perceived by policy makers and scholars alike to be ripe with problems - and little has changed since to warrant a rethinking of that perception. The problems revolved around the fact that these markets were ill equipped to deal with sovereign default in any satisfactory manner. A series of debt crises during the 1990s showed that sovereign bonds are subject to non-payment and rescheduling much like other classes of debt, but that they lack provisions and procedures to cope with such situations in an efficient and orderly way. This lack of structure has a number of consequences, the most important of which can be summarized under the heading of collective action problems.

Until recently, the majority of sovereign bond contracts - all but those that are governed by the laws of England, Japan or Luxembourg - required the unanimous approval of all bondholders if any of their payment terms were to be amended. Thus, when a sovereign debtor approached its bond creditors to seek a reduction of principal or interest, or a deferral of repayment, this could as a practical matter not be achieved within the constraints of the existing bond contracts. The only viable route to debt relief was therefore to offer the bondholders new securities with more lenient payment terms in exchange for the ones they currently held. Since - leaving aside semi-coercive strategies such as exit consents - participation in a bond exchange is voluntary, these exchanges are vulnerable to various types of strategic behaviour on the part of bondholders. There is an incentive for some creditors to hold out by rejecting the exchange offer and hoping for full repayment under the original terms, thus free-riding on their more cooperative peers who, by agreeing to debt relief, help restore the debtor's ability to pay. As this behaviour is widely anticipated, the bondholders' general preparedness to participate in a proposed exchange is reduced, which serves to prolong the crisis. In the absence of a powerful coordination mechanism, this discrepancy between what is individually rational and collectively desirable creates outcomes that are inferior from the perspective of but a few creditors, and unambiguously harmful to the debtor country and third parties.

To make matters worse, most bonds afford each bondholder the right to largely unconstrained individual and independent legal action against a sovereign debtor in case of default. This litigation option increases the incentive to hold out and may result in a race to the courthouse, a well-known phenomenon in which every creditor attempts to be the first to sue for full repayment at the detriment of all others.

These collective action problems are aggravated by the lack of collective representation. Bondholders usually have no reliable means of communication with each other or with the debtor country, no systematic procedure of representation *vis à vis* the sovereign, for example in restructuring negotiations, and no binding rules that might allow them to coordinate their strategies, e.g. to refrain from harmful individual action. For various reasons, bonds are much more prone to these problems than other types of sovereign debt, such as bank loans and inter-government debt (Fisch and Gentile, 2006).

In light of these difficulties and to avoid large output losses in the debtor countries following lengthy and agonizing restructuring processes, the international community in many instances felt compelled to provide bail-outs. These subsidized loans shift the burden of the crisis from investors to tax payers both in the donor countries and in the recipient country. They are therefore an unsatisfactory solution on the grounds of equity as well as efficiency because of the resulting moral hazard on the part of the lenders. It is against this background that three major proposals for changes in bond drafting practice emerged from public sector institutions, in particular the International Monetary Fund (IMF), around the year 2002.

The most ambitious of these proposals, which later came to be called the Sovereign Debt Restructuring Mechanism (SDRM), was initiated by the US Treasury in 2001 and then developed by the IMF (Gelpern and Gulati, 2007). The SDRM was known as the statutory approach to sovereign debt restructuring because it envisaged a legal framework that would give troubled debtor countries the option of subjecting themselves to an international analogy to Chapter 11 of the US Bankruptcy Code. The proposal was greeted with formidable resistance, in particular from market participants, and in consequence was quietly dropped in 2003. Points of criticism included the strong role of the IMF and its potential conflict of interest as both a major lender and a facilitator of the process, the enormous political efforts required to create the necessary legal framework, and the potential for debtor moral hazard

because the SDRM was perceived as being soft on borrowers. A number of authors have, however, voiced the suspicion that the SDRM was never intended as a viable solution in the first place, but that instead its purpose was always that of a threat which was to be carried out in case the market did not accept the proposal that was actually favoured by US policy makers (see, for example, Portes, 2003).

This second proposal called for the universal adoption of collective action clauses (CACs) in sovereign bond contracts. CACs break with unanimity by enabling a qualified majority of bondholders, typically 75%, to agree with the debtor country on amending the payment terms of the bonds to provide debt relief. That amendment then becomes binding also for non-participating bondholders. These provisions had already featured in bonds governed by the laws of England, Japan, and Luxembourg, but their effectiveness was limited by the fact that almost all countries continued to issue bonds that required unanimous consent, such as those governed by the laws of Germany and the state of New York. Beginning in the mid-1990s, a growing body of research articles, policy papers and statements by academics and officials emphasized the benefits of CACs and called for their inclusion in all new bond issues. The calls were eventually¹ heard when Mexico made the first publicly noted² issue with CACs under New York law in March 2003. Almost all issues in that jurisdiction have followed Mexico's precedent. German law, however, remains the last stronghold of unanimous consent.³

Once all outstanding bonds with unanimous consent provisions have matured or have been exchanged, CACs promise to effectively put a stop to holdout behaviour – but only after a restructuring agreement has been reached. From the moment the debtor has defaulted until the resolution of the crisis – a period that may span years – bondholders typically remain unconstrained in exercising their individual legal rights. Moreover, once they have exercised those rights, bondholders are not required to share the

¹ For potential reasons for the delayed market reaction, see Gelpern and Gulati (2007) and Häseler (2009).

² Gugiaatti and Richards (2004) and Gelpern and Gulati (2008) document a number of sovereign bond contracts from before 2003 that include CACs despite being governed by New York law.

³ To erase the doubts about the admissibility of CACs under German law (Häseler, 2009), a reform of the *Schuldverschreibungs-gesetz* (indenture law) was enacted on August 5th, 2009. Whether or not there will be any impact on market practice is difficult to say because only a single bond has been issued under German law since 2004, according to the dataset used in this study.

proceeds of litigation with their peers, even though the use of sharing clauses was endorsed repeatedly by institutions such as the IMF. CACs in their present form therefore fail to solve collective action problems during a crucial stage of the restructuring process. Furthermore, despite several initiatives, recent bond issues with CACs have made no progress towards addressing the collective representation problem (Drage and Hovaguimian, 2004). This is where the third reform proposal comes in.

It has long been the custom in US corporate bonds, as well as in a minority of international sovereign bonds, to appoint a trustee who will represent the interests of bondholders in their relations with the debtor country. Though market practice is not uniform, the trustee typically has powers to monitor the debtor's compliance with the terms of the bonds, to accelerate the debt in the event of default, to initiate legal action on behalf of, and instead of, the individual bondholders, and to share the proceeds on a *pro rata* basis. The appointment of a trustee thus constitutes an obvious complement to the use of CACs and a feasible and suitable solution to the remaining collective action problems.

The benefits of channelling bondholder action and communication through a trustee have been stated repeatedly for almost 30 years (Smart, 1982; Goodall, 1983; Herbert, 1987; as well as numerous more recent publications by the IMF, the Bank of England, and practitioners such as Lee Buchheit). The increased use of trustees first appeared on the policy agenda in a report by the G-10 Working Group (Group of Ten, 1996), and was picked up and reiterated by the IMF staff (IMF, 2002a, 2003a), amongst others. Meanwhile, as will be shown in more detail below, new bond issues have not relied on trust structures to the extent that their proponents would like to see.

Hässeler (2008) discusses several potential reasons for this lack of progress. Among them is the perception that bondholders' individual enforcement rights provide an essential deterrent against opportunistic sovereign defaults, and that the reallocation of enforcement rights to a trustee would in consequence destroy this deterrent and thus cause a deterioration of market discipline. This view has been expressed both by academics (Fisch and Gentile, 2004; Bedford, 2005) and by practitioners

(Chamberlin, 2002b).⁴ While Hässler (2008) examines the market reaction over time to an event that reveals investor's attitudes towards collective enforcement rights more generally, this paper focuses specifically on the question as to whether bonds with collective enforcement rights – those governed by trust structures – are perceived as being in greater risk of default. This question is addressed for the first time through a number of tests based on a cross-section of international sovereign bonds. Using the literature on borrowing costs effects of collective action clauses as a starting point, this paper applies that literature's methodology to trustees and expands on it by presenting additional empirical approaches. While Fisch and Gentile (2004) propose a similar research agenda, this is, to the best of our knowledge, the first implementation.

The paper proceeds as follows: The next section sets out more clearly the implications for enforcement rights of trust structures as compared to their alternative, fiscal agency agreements. Section 3 describes the dataset and presents some descriptive statistics on sovereign bond issuing practice which supplement the earlier literature on collective action clauses and trustees. Section 4 is dedicated to the empirical methodology and results. Section 5 concludes.

2 – Trustees versus Fiscal Agents

Governance Structure and Enforcement Rights

This section introduces the term 'governance structure' to denote the way a sovereign debtor's relations with its creditors are organised. The governance structure of a bond can take three forms - trust deed, trust indenture, or fiscal agency agreement only - and determines certain aspects of the communication between debtor and bondholders, the representation of bondholders, and the set of rights that bondholders enjoy, either individually or collectively, in dealing with the debtor country. We will show that the three

⁴ In correspondence with the author, Michael Chamberlin, Executive Director of the Emerging Markets Traders Association, said, "My personal view is that market discipline and individual rights of action are important protections for investors."

governance structures provide a menu of choice between the extremes of individual and collective action, the latter having important advantages both during a crisis and in times of normal debt service. The exposition will be brief since the differences between trust structures and fiscal agency agreements have been covered in depth elsewhere.⁵

Most sovereign bonds are subject to a fiscal agency agreement. When issuing the bond, the debtor appoints a fiscal agent, typically a bank, to perform a set of largely administrative functions, in particular to receive payments of interest and principal from the debtor for distribution to the creditors, but also to distribute and register the bonds themselves and to relay information from the debtor country to the bondholders. The fiscal agent serves solely the issuer and bears no obligation towards the bondholders, except that all monies received from the debtor are held in trust for them. Importantly, under a fiscal agency agreement each bondholder retains the right to contractual remedies in the event of a default. This includes the right to accelerate their claims under certain conditions, such as a missed interest payment, and to initiate legal proceedings against the debtor. In some cases, however, acceleration requires a vote by the holders of a certain proportion of the principal.

Instead of, or in addition to, the fiscal agent, the issuer may appoint a trustee to represent and protect the interests of the bondholders.⁶ The trustee will take over most enforcement powers from the individual bondholders, the details depending on whether the trust is created under English law (trust deed) or US law (trust indenture). The trust concept is not recognised or used in most other jurisdictions.

The English-style trust deed is a contract between the issuer and the trustee which specifies the extensive ways in which the trustee is obliged to serve the interests of the bondholders. The trustee has both the power and the duty to monitor the debtor's compliance with the terms of the instrument, and to take remedial measures in case the debtor fails to meet its contractual obligations. The trustee may act

⁵ See, for example, Horn (1972), Smart (1982), Goodall (1983), Pergam (1985b,c), Herbert (1987), Buchheit and Gulati (2002), Hässeler (2008, 2009).

⁶ See Horn (1972) and Herbert (1987) on the nomenclature of, and interaction between, fiscal agent and trustee when both are present in a sovereign bond issue.

either on its own initiative or when instructed to do so by the required proportion of bondholders. The right to accelerate the debt and to initiate legal proceedings against the debtor rests exclusively with the trustee, rather than with the individual bondholders, and the proceeds from litigation will be shared among the bondholders on a pro rata basis. An exception lies in the case where the trustee fails to take action despite being prompted to do so by a certain percentage of bondholders. Only then will the individual bondholders redeem the right to accelerate and enforce their own claims as they would under a fiscal agency agreement.

New York-style trust indentures generally follow the requirements of the US Trust Indenture Act of 1939, even though the act applies only to corporate bonds. The Act stipulates that “each bondholder has an unqualified right to bring an individual enforcement action to recover her share of any amounts of principal and interest not paid on their respective due dates. Apart from this individual right to recover overdue amounts, however, only the trustee has the right to pursue other remedies, including the important right to sue for accelerated amounts” (Buchheit and Gulati, 2002, pp. 15). Unlike the trust deed, the trust indenture does not imply a sharing requirement. Thus, trust indentures constitute a middle ground in terms of enforcement rights between the extremes of fiscal agency agreements and trust deeds.

Despite the differences, trust structures of either description share a set of advantages over fiscal agency agreements. Herbert (1987) stresses the greater flexibility of trustees in dealing with changing circumstances. The trustee may consent to minor changes in the debt instrument and even waive breaches of the contract terms, which might otherwise trigger acceleration or legal action, as long as the interests of the bondholders are not ‘materially prejudiced’. Pergam (1985c) highlights the trustee’s ability to call a meeting of bondholders, something which the fiscal agent cannot typically do. Not least in this sense, trust structures complement collective action clauses. According to Goodall (1983), an additional benefit lies in the fact that all funds received by the trustee from the debtor are held in trust for the bondholders, whereas funds held by a fiscal agent for the same purpose can be used to settle any debts of the issuer.

Arguably the greatest advantage, however, is the trustee’s ability to restrain individual bondholder action. And it is here where, according to Buchheit and Karpinski (2006, p. 230), US-style trust

indentures fall dramatically short of their English counterparts: “[I]f individual holders are free to bring their own lawsuits to recover their share of missed payments, then a Hobbesian state of nature is created among the bondholders.” Only a trust structure according to the English pattern can completely eliminate the well-documented risk of a ‘race to the courthouse’ where bondholders use whatever individual enforcement rights they possess to satisfy their claims while the efficient approach to crisis resolution clearly demands coordination both among the bondholders as well as with the debtor country. By suppressing selfish and premature individual enforcement of the bonds, trust deeds provide greater protection both for investors, but also for the issuer, who will be spared a multiplicity of actions.

These benefits of bond enforcement through a trustee naturally refer to a trustee who does not hesitate to make use of the powers vested in him, and whose powers are properly specified in the first place. Buchheit and Gulati (2009) point out the tendency of bond drafters to dilute the standard of care that the trustee must exercise in representing the bondholders and the dire consequences for debt enforcement.

The added services of a trustee naturally come at a cost, which is borne by the issuer. Yet, at “a few thousand dollars a year” (Lee Buchheit) or “a basis point or two” (Smart, 1982, p. 18), the difference relative to a fiscal agent is rather moderate. For borrowers who are most unlikely ever to default, all that needs to be done is to distribute payments of interest and principal, and that is achieved more cheaply by a fiscal agent (Smart, 1982; Goodall, 1983). As soon as default becomes a real possibility, however, most scholars would agree that a country is well advised to issue new bonds under a trust structure, and in particular one with collective enforcement rights only. And in fact there are signs that market practice may begin to move in that direction. Following the advice of Lee Buchheit on behalf of Cleary Gottlieb Steen & Hamilton LLP, “Grenada (in 2005) and Belize (in 2007) have issued New York-law bonds under US-style trust indentures that lodge all enforcement powers in the trustee, similar to an English trust deed. This represents a significant convergence of English trust deed and US trust indenture documentation practices” (Buchheit, 2007, p. 2). The Republic of Congo also issued bonds under a trust indenture but with full collective enforcement rights in December 2007.

Deterrence

As noted before, it has been argued that bondholders' individual enforcement rights provide an essential check on the borrowers' inherent ability to discontinue debt service as they see fit. An English-style trust deed, by contrast, is the governance structure which is perceived as being the least likely to produce creditor litigation. The trustee may elect not to react upon a breach of the bond contract, and several authors have in fact noted a certain tendency for trustees to move against the debtor only when obliged to do so.⁷ A trustee is also much easier for the debtor country to deal with in the case of default, making the prospect of creditor reaction to default yet more bearable, as compared to individual creditor rights. In section four, this paper thus tests the hypothesis of a systematic relationship between governance structure and default. According to the hypothesis, trustees, and in particular those of the English variety, are not as effective as individual bondholder action in deterring default.

This deterrence view of enforcement rights is open to scepticism. It appears to rest on a set of specific assumptions about the debtor's motives to default (Häseler, 2008). First, deterrence can play a role only if the debtor has some discretion over the continuation of debt service. If most defaults arise out of genuine distress, then there little scope for deterrence, except perhaps in the policies that lead up to the distress.⁸ Second, even if the debtor has a choice, the hazard of creditor litigation is only one of many looming costs of default, which also include loss of reputation and consequently higher borrowing costs, negative effects on economic growth, political or trade sanctions, and so on. Third, debtors often default on several classes of debt at once (Pergam, 1985a), which further reduces the importance of the threat of legal action from one particular class of creditors.

⁷ As Michael Chamberlin said in correspondence with the author: "Trustees are notable for their caution, occasional incompetence and being subject to institutional constraints (need indemnities, may have conflicts of interest or be subject to political suasion) that make them less effective as litigants than individual holders." See also Goodall (1983, p. 2): "[I]nvestors often complain that trustees do not act positively enough." Buchheit and Gulati (2009) document the case of a "bovinely passive trustee" who failed to safeguard creditor rights in Ecuador's recent default in 2008.

⁸ Buchheit and Gulati (2009) provide an account of Ecuador's said default, which was clearly not of the distress type.

Moreover, assuming for the sake of the argument that the prospect of bondholder action does tend to deter defaults, it is by no means clear that a regime of individual enforcement rights will give rise to more of such action. Given returns to scale and externalities in litigation, it may well be that a trustee will initiate legal proceedings when no individual bondholder would. This is because for smaller claims the costs of going to court will outweigh the potential gains and because the costs of legal action under a fiscal agency agreement are purely private whereas the benefits in terms of disciplining the debtor are partly public in nature.⁹ Evidently, theoretical considerations on the deterrence effect of individual enforcement rights are inconclusive, which is why we turn to empirical data in the next two sections.

3 – Data

Sources

The basis of this study is the universe of international¹⁰ sovereign bonds whose information was available for download from the Bloomberg¹¹ database on March 5th, 2009, including matured and recalled bonds. In contrast to most of the existing literature, the data is not restricted to emerging market economies. The advantage of including the whole range of credit ratings is - besides the greater sample size - that the resulting increase in variation in some of the variables will produce better estimates.

Figure 1 shows the rating composition of a typical sample used in the regressions below. While, relative to earlier studies,¹² the rating range is extended on the left by about one third, less than 15% of the bonds in the sample fall in that part of the spectrum.

⁹ These arguments are developed more fully in Häseler (2008).

¹⁰ Bloomberg's definition of "international" refers to the bonds that are issued on non-domestic markets. For the purpose of this study and throughout the literature, "international" means that the bonds are governed by laws other than those of the issuing country. Adjustments were made to account for the difference in definitions.

¹¹ Besides Bondware, Bloomberg is the standard source of bond information in the literature. Becker et al (2001) and Gugliatti and Richards (2003) obtain details such as governing law and ratings from Bloomberg. All data is available upon request.

¹² For example, Becker et al (2001) use only bonds from countries rated A1/A+ or below.

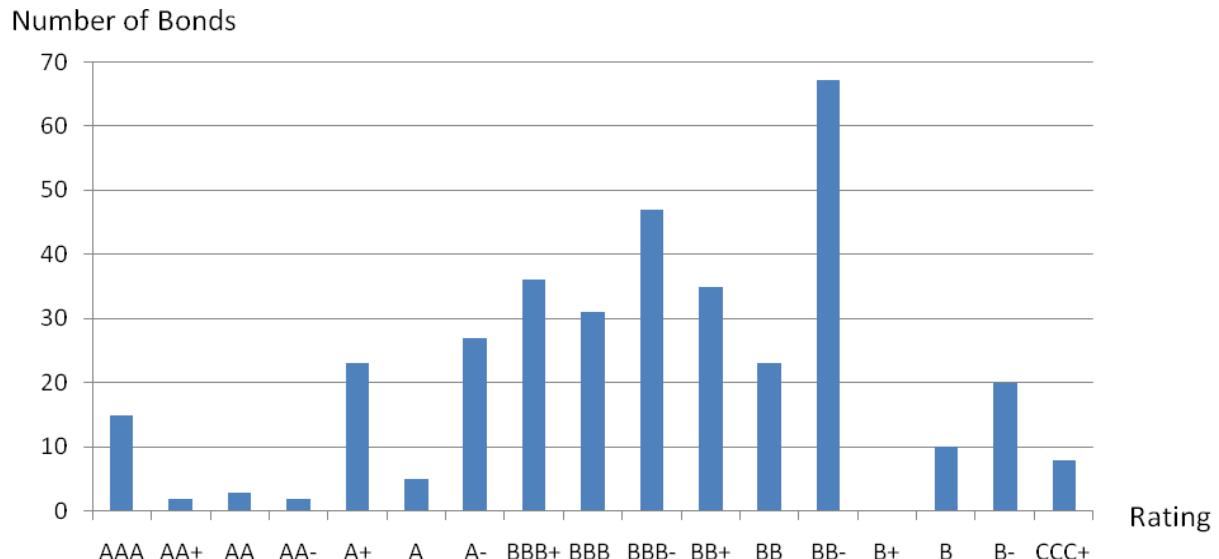


Figure 1: Rating composition of a typical sample

The download encompasses a total of 3941 bond issues; however, depending on the subject of analysis, only a few hundred bonds feature all the required information. The download information was supplemented with details from the prospectuses, where available, in order to increase the sample size for bonds with rare characteristics, in particular defaulted bonds that were issued under trust deeds. A sample of the data comprising 20 bonds was checked for accuracy with respect to governance structure by comparing the downloaded information with the prospectuses. No deviations were found. Issue sizes were converted into dollar amounts using exchange rates from www.oanda.com. Relying primarily on Standard and Poor's figures, ratings were converted to a numerical scale, where a high value corresponds to high default risk. Blanks were filled with the help of Moody's ratings or on the basis of the fact that all bond issues by a particular country almost always receive the same rating.

Before turning to the analysis proper, some descriptive statistics will be derived from this sample to expand on the figures that are available in the earlier literature on governance structure and collective action clauses, respectively.

Governance Structure

The literature contains fairly detailed figures on the use of collective action clauses both over time (e.g., Bradley et al, 2008) and across jurisdictions (IMF, 2003a). Comparable figures on governance structure are, however, difficult to find. Any information provided is usually of a rather vague nature, such as “trust structures are common under English law”. The dataset collected for this study provides a good opportunity to close that gap. It must be noted, though, that the statistics below cover only about 40% of all bond issues during the respective period due to the limited availability of information, in particular with respect to governance structure and governing law.

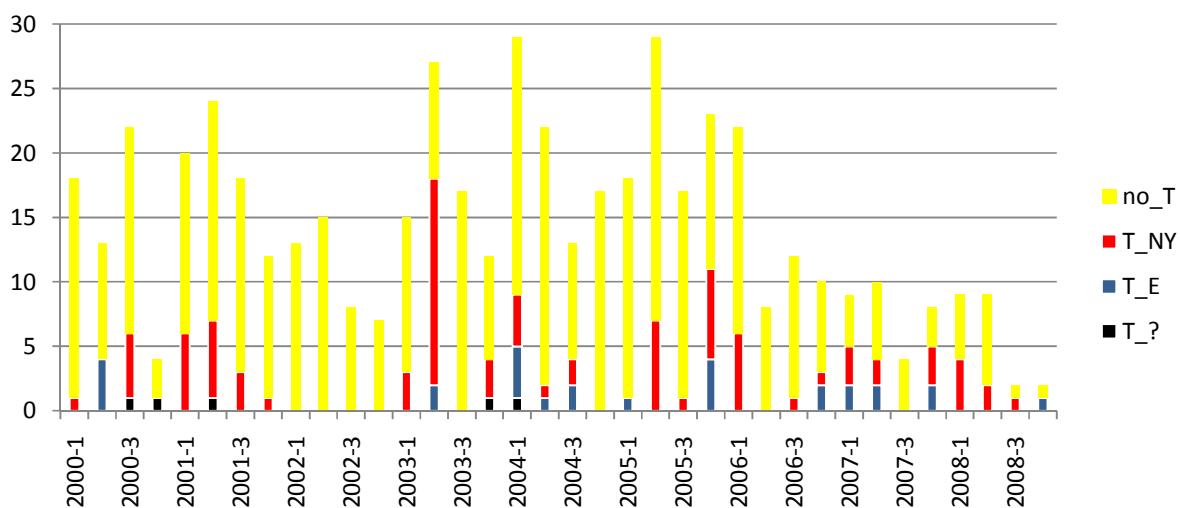


Figure 2: Number of bond issues per quarter with and without trustees

Figure 2 shows the number of bond issues per quarter over the last eight years and the associated governance structures. “no_T” refers to bonds that were issued under fiscal agency agreements only; “T_NY” means trustee and New York governing law; “T_E” means English-style trust deed; “T_?” means trust structure but unknown governing law. Two things should be noted at this point. First, throughout the analysis, a bond that is labelled as having a trust structure may or may not also have a fiscal agent. It is the presence of a trustee, rather than the fiscal agent, that determines the nature of enforcement rights. Second, a number of bonds are listed as T_E even though they are in fact governed by

the laws of New York. This applies to two bonds issued by each of Belize and the Congo, and three bonds issued by Grenada, all of which concentrate enforcement rights in the trustee to the same extent as they would under English law, as mentioned in section two.¹³

The chart shows that in all but three quarters, the majority of bond issues feature no trustee. Among those that do have collective representation, trust indentures are far more common than trust deeds. This is not to say that issuers dislike the stronger version of collective enforcement rights in trust deeds; it may simply reflect the fact that New York is the more popular choice for governing law. In fact, the proportion of bonds that is issued under a trust structure is quite similar in the two jurisdictions: 24% in England versus 28% in New York.¹⁴ This finding is at odds with an impression that is sometimes conveyed in the literature, according to which trustees are more popular in England than in the US where there is a stronger emphasis on individualism.

Trustees were not used in any other jurisdiction in this dataset, except for one notable exception: Morgan Stanley Bank AG acted as trustee for a Zloty-denominated bond that was issued under German law by the Federal Republic of Austria on June 11th, 1997, even though trust structures are generally thought not to be recognised by civil law jurisdictions.¹⁵

¹³ If the markets care about such subtle differences in contract terms, they will be aware of them, given the coverage in trade publications (Buchheit, 2007). The impact of this re-coding on the subsequent regressions is, however, negligible because at most two of such bonds carry sufficient information to be included in any given regression.

¹⁴ This refers to all bonds issued between 2000 and 2008 whose governance structure could be ascertained.

¹⁵ See, for example, Liu (2002) or Group of Ten (2002). According to Horn (1972), trustees do exist under German law, but their functions are much more limited than under English or New York law.

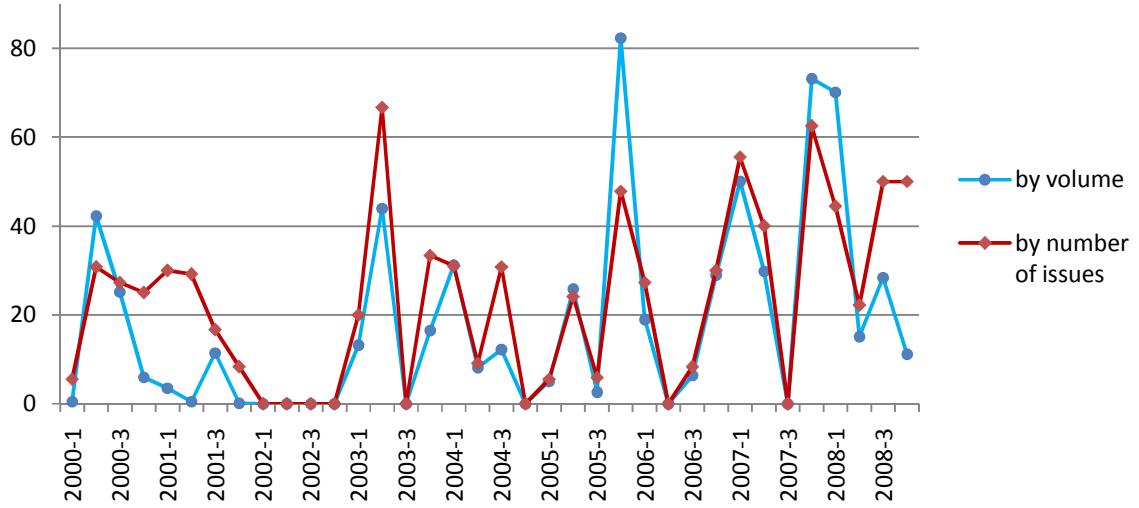


Figure 3: Percentage of bonds that were issued under a trust structure

Figure 3 more clearly shows the development of trustee usage (under either governing law) over time. The breakup by volume and by number of issues is almost identical because bonds with and without trustees differ in issue size by no more than 5% on average. The graph suggests a slight upward trend. However, variability over time remains high. Thus, the data are in accordance with Buchheit's (2007, p. 2) statement that there "has been a noticeable shift toward the use of trust structures in sovereign bond issuances over the last few years." Alas, trustees remain far from becoming the market standard.

The data also allow us to probe the question as to what kinds of countries issue under trustees. The previous section offered some thoughts on costs and benefits of trust structures in relation to default risk, and suggested that trustees are particularly advisable for low-rated borrowers. The data in fact confirm the theoretical considerations.

Table 1 shows summary statistics for all bonds whose governance structure (trustee / no trustee) is known. Standard & Poor's ratings were converted to numerical values, where large numbers refer to higher default risk. Bonds with trustees are associated with a higher default risk than those without. The difference in sample means is significant at standard confidence levels.

	no Trustee	Trustee
No. of Bonds	298	59
Mean Rating	9.81	11
Variance	13.69	12.45
t-test statistic	2.348	

Table 1: Average rating of bonds issued with and without trustees

Statistical association of course has nothing to say about causation and in particular about the direction of causation. As with collective action clauses or governing law (Becker et al, 2001), there is no indication that rating agencies consider the presence of a trust structure as a risk factor in a bond. Thus, if there is causation, it must run from a country's credit quality to its choice of governance structure.

Collective Action Clauses

Though collective action clauses are not the primary subject of this article, the present dataset provides a valuable opportunity to check some of the stylised facts that appear to be widely accepted in the literature. Two bond characteristics are of interest here, use or non-use of CACs (as reported by Bloomberg), and governing law. These two pieces of information are available for a sample of 483 bonds, with issuing dates going back to 1983. The split in terms of governing law is 1:7:9:137:329 bonds under French, Japanese, German, English, and New York law, respectively. Relative to figures reported elsewhere, the absence of Luxembourg law is notable, as is the marked predominance of New York law. Unsurprisingly, none of the small number of German law bonds feature CACs.

According to the stylised facts, both English and Japanese bonds contain CACs, while bonds that are governed by the laws of New York did not contain CACs prior to 2003. These statements are sometimes modified through the use of words such as "traditionally", "usually" or "typically", or through reference to "the market standard".¹⁶ The first half of the empirical literature on CACs¹⁷ relied on these "facts"

¹⁶ Virtually all publications on collective action clauses contain global statements such as these, for example Liu (2002), IMF (2002a, 2003a), and Gugliatti and Richards (2003).

almost unquestioningly, inasmuch as governing law was used as a proxy for the presence of CACs, whose actual use or non-use was much more difficult to ascertain. The present data indicate that this reliance was unwarranted, and even more so than has been stated previously.¹⁸

First, none – rather than all – of the Japanese law bonds in the sample contain CACs. This observation is diametrically opposed to common wisdom. Even though at seven, the number of bonds is very small, and even though we have information on only about 10% of all bonds in the dataset, the complete absence of CACs in these few bonds creates at least some discomfort with the view that “all” or “most” Japanese law bonds contain CACs.

Second, the use of CACs is the standard under English law to a far lesser extent than many publications would have the reader believe. Figure 4 below shows that in most years since 2000, the majority of English law bonds did not contain the clauses. In fact, only about 28% of all bonds on which information is available allow for collective action. This is nowhere near “the market standard”. And since the number of bonds which this observation is based on is much larger than with respect to the Japanese law bonds, it is possible to say with some confidence that the common perception about issuing practice under English law needs to be revised.

Third and last, collective action clauses were more prevalent under New York law before 2003 than is commonly thought. Several authors have already documented that Mexico’s issue in March of that year was not the first to make use of the clauses in that jurisdiction. Liu (2002, p. 7) mentions “at least one case” of majority restructuring provisions under New York law. Gugiaatti and Richards (2004, p. 6) identify “five emerging market sovereign issuers [Bulgaria, Egypt, Kazakhstan, Lebanon and Qatar] that have issued bonds into the international market under New York governing law but which nonetheless include CACs.” The authors estimate the total face value of such bonds to be around \$11.9 billion.

¹⁷ This includes the papers by Tsatsaronis (1999), Eichengreen and Mody (2000), and Becker, Richards, and Thaicharoen (2001).

¹⁸ Gugiaatti and Richards (2004) and Hässler (2009) remark that the correlation between governing law and CACs is less than perfect.

Finally, Gelpern and Gulati (2008, p. 5) mention “examples of CACs in New York law paper going back to 1983” but unfortunately do not provide any clues as to the identity of these securities.

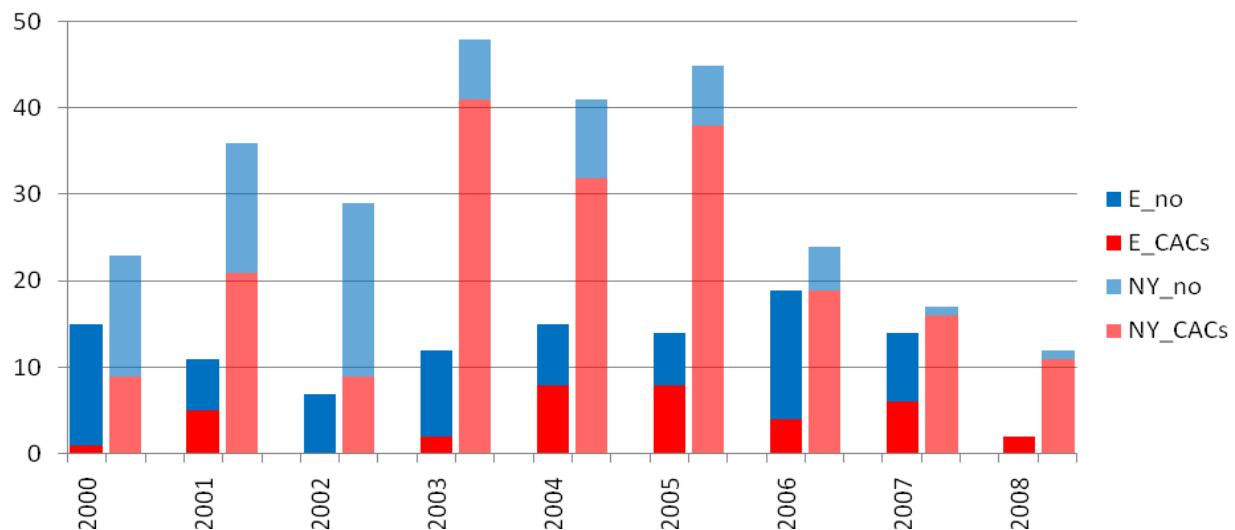


Figure 4: Number of bonds issued by governing law and presence of CACs

The Bloomberg data reveal a picture that is even more strongly at odds with the stylised facts. As shown in figure 4, already in 2001 more than half of all issues under New York law contained CACs. In total, 21 countries issued 67 bonds with CACs despite being governed by New York law before March 2003. The overall issue size amounts to more than \$95bn – eight times the amount found by Gugliatti and Richards (2004). Such issues have occurred regularly from 1996 onwards, but also before: Italy in 1993 and New Zealand in 1986. The difference to the existing literature cannot be explained solely by the fact that this sample includes issues by all countries, rather than merely emerging markets, because these figures include only five bonds by two non-emerging market issuers, totalling a mere \$8bn in face value.

The implications of these findings are twofold. Firstly, general statements about the use of CACs in certain jurisdictions are hardly tenable. Secondly, yet more weight should be given to the criticism of the early empirical literature on CACs (1999 to 2001), which equated governing law with the use or non-use of CACs. Given the above evidence on ‘irregularities’ under Japanese, English, and New York law, it

seems likely that those early studies misclassified more than 20%, but perhaps up to one third, of all bonds in their samples. In light of the often shaky coefficient estimates, coding errors of such magnitude can tip the results either way in an unpredictable manner.

4 – Methodology and Results

This section presents two alternative approaches to assessing any potential deterrence effect of individual enforcement rights. First, we extend the methodology of the literature on collective action clauses to test for secondary market spread differentials between bonds issued under trust structures versus fiscal agency agreements. Then we depart from previous research by testing directly for an effect of governance structure on the incidence of defaults.

Spread Differentials

There was at the beginning of the millennium a controversy as to whether the presence of collective action clauses in a sovereign bond is associated with higher spreads, i.e. higher borrowing costs. If it were, it would be very difficult to persuade sovereigns to include the clauses in new bond issues. It took a sizable body of research to convince the market, as well as academia and the public sector, that CACs do not give rise to higher spreads.¹⁹ Such evidence does not yet exist with respect to governance structure. To show whether the appointment of a trustee increases borrowing costs may help the reform efforts to increase the use of collective enforcement structures.

Spread differentials are also a good approximation of our true variable of interest, default risk. While spreads also reflect other factors, such as liquidity and exchange rate risks, default risk is by far the most important component. A more direct test of default risk follows towards the end of the section.

¹⁹ The most important contributions to that literature are discussed in Häseler (2009).

We proceed as follows. The dependent variable consists of the difference in basis points between a bond's yield-to-maturity and the yield on a matching risk-free bond of the same currency and comparable maturity. Logs are taken in accordance with standard practice in the literature. The independent variables of interest relate to governance structure. The presence of a trustee under English and US law, respectively, is assigned a dummy variable each; fiscal agency agreements constitute the omitted category. The dummies are constructed from the information that is available in the Bloomberg database: the governing law of a bond and the name of the trustee or fiscal agent. Bonds that were reported as having a trustee were coded as such, regardless of whether or not a fiscal agent was also mentioned, for the reasons given above. In parts of the analysis, the distinction between English and US-style trustee is dropped to preserve a sufficiently large number of bonds with a given set of characteristics.

The trustee dummies were added to the regression only once a baseline model with a reasonably good fit was found so as to resist the temptation of adding controls according to their effect on the coefficients of interest. When control variables are added, the availability of information limits the sample size to around 300 observations. Again as before, some observations were adjusted to reflect the full collective enforcement rights in a number of Buchheit-advised New York law bonds, i.e. they were coded as being governed by an English trust deed. The peculiar Austrian law bond mentioned previously was omitted, as were a few bonds with negative spreads.

As for the control variables, credit rating has by far the greatest explanatory power. Further controls which were used in some but not all specifications include the bid-ask-spread as a proxy of liquidity, total duration, remaining time to maturity, dollar amount outstanding, and sets of dummies for the market of issue, maturity type, the presence of options, and the use of collective action clauses. Finally, this particular dataset necessitates an additional dummy variable, which we term MINOR_CURRENCY. A few bonds are issued in currencies whose home countries are associated with considerable default risk. In those cases, Bloomberg's measure of spreads is distorted; it does not reflect the risk of that particular bond but rather the difference to some other risky asset. For example, a bond issued by the Federal Republic of Austria in Turkish lira is much less likely to be in default than the benchmark bond by the

Turkish government, which results in a spread that is biased downwards. The dummy variable MINOR_CURRENCY captures this handful of cases.²⁰

Baseline regressions

The first set of regressions is done in simple log-linear ordinary least squares, without regard to any potential issues of endogeneity. Except for the omissions mentioned above, the sample includes all bonds that feature the required information and that were not in default at the time of download.²¹ The resulting sample size is 355 bonds.

Table 2 summarises the results of some baseline regressions for spreads. Model 1 includes all control variables whose coefficients are statistically significant at standard confidence levels. GLOBAL, CALL, and REPO are dummy variables for bonds that were marketed globally, have call options attached to them, or have been partly redeemed by the issuer, respectively. The model is able to explain almost 70 per cent of the variation in spreads. The coefficients are fairly robust to the inclusion of additional controls and to specification changes.

²⁰ Becker et al (2001) omit such ‘exotic’ bonds from the sample. It is probably best to include them as long as their particularities can be reasonably well modelled.

²¹ The spread on a bond in default, tautologically, does not reflect default risk. Such bonds are therefore excluded from this part of the analysis.

Dependent Variable: LOG(SPREAD)				
	Model 1	Model 2	Model 3	Model 4
CONSTANT	4.375*** (0.125)	4.365*** (0.129)	4.365*** (0.125)	4.357*** (0.165)
BIDASK_SPREAD	0.222** (0.071)	0.212** (0.071)	0.199** (0.073)	0.186** (0.076)
RATING	0.237*** (0.028)	0.236*** (0.028)	0.238*** (0.028)	0.232*** (0.036)
RATING^2	-0.005*** (0.001)	-0.005*** (0.001)	-0.005*** (0.001)	-0.004** (0.002)
MINOR_CURRENCY	-3.059*** (0.207)	-3.069*** (0.206)	-3.077*** (0.207)	-3.085*** (0.206)
GLOBAL	-0.248*** (0.056)	-0.245*** (0.056)	-0.242*** (0.056)	-0.189*** (0.062)
CALL	0.223*** (0.138)	0.213 (0.138)	0.198 (0.139)	0.25* (0.149)
REPO	-0.11* (0.061)	-0.101* (0.061)	-0.101* (0.061)	-0.151** (0.067)
TRUSTEE		0.118* (0.069)		0.16** (0.073)
TRUSTEE_ENGLISH			0.24 (0.157)	
TRUSTEE_NEW_YORK			0.095 (0.074)	
CACS				-0.092 (0.063)
Observations	355	355	355	308
adj. R^2	0.676	0.678	0.678	0.688
10%-level (*), 5%-level (**) and 1%-level (***) level of significance, two-tailed test.				
Heteroskedasticity-consistent standard errors in parentheses.				

Table 2: Baseline OLS regressions for spreads

Model 2 then introduces a dummy variable for the presence of a trustee under either governing law. While the incumbent coefficient estimates are hardly affected, it appears that bonds with trustees carry somewhat higher spreads than those with fiscal agency agreements only, though the difference is barely significant. The point estimate would suggest that bonds which are subject to trust arrangements trade at an eleven per cent spread premium. For a country with an average credit rating like Brazil, this would imply a spread premium for bonds with trustees of 10 to 15 basis points. However, the results cannot be

relied upon given the large standard error. Through the inclusion of a dummy variable for governing laws under which trustees may be used (only English and New York law in this sample), it can be shown that the trustee effect is not simply attributable to governing law since the coefficient on that dummy is insignificant whereas the coefficient on trustees remains largely unchanged.

In model 3, a distinction is made between trustees under English versus New York law. Again, none of the other variables are materially affected, and neither of the trustee coefficients is anywhere near statistical significance. Interestingly though, the results suggest that the spread premium is larger for English law trustees than for their American counterparts. This is what one would expect if it were true that trust structures entail a higher default risk because of the reduced threat of disciplining litigation. According to that view, American trust indentures are the lesser of two evils.

Finally, in model 4 a further dummy variable for the presence of collective action clauses is introduced. Due to the limited availability of information, the sample is now restricted to 308 bonds. Even in this subsample, the coefficients on the controls remain virtually the same, which speaks once more for the robustness of this set of regressions. The coefficient on collective action clauses is negative but the standard error is too large to rely on the estimate, which would suggest a reduction of spreads by less than 10 basis points. The coefficient on trustees (of either description), however, turns significant at the 5%-level in this specification.

As a final exercise with this set of regressions, the dependent variable was modified somewhat so as to make it more amenable to the default risk interpretation which was originally intended. If, besides default risk, spreads reflect liquidity and a number of other less important factors, then stripping them of the liquidity component will give greater weight to default risk in the variable that results from this transformation. In practical terms, spreads were regressed on the bid-ask-spread as the commonly accepted proxy for liquidity, raised to the first, second and third power. The residuals from this auxiliary regression then become the new dependent variable to replace the log of spreads in the baseline regressions. At least with respect to the trustee coefficients, the results are almost identical to those obtained previously and are therefore not reported.

Sample selectivity

Due to missing information, in most of the regressions throughout this study the sample size amounts to less than 10% of the bonds that were downloaded, which may in turn constitute but a sample of the universe of international sovereign bonds. There is thus a possibility that the estimated relationships are not representative of the wider population of bonds; in other words, they could be biased.

The unavailability of information, and thus the selection of the samples, is presumably non-random. Yet, such non-randomness by itself need not cause bias. There would have to be some factor, call it X, that is on the one hand correlated with the availability of information and, on the other hand, with the relationships under investigation, i.e. with the effect of governance structure on default risk. X would have to exhibit both of these properties to create a potential for bias. The former of these is not easily tested; the latter, by contrast, is. We simply add to the baseline regressions interaction terms involving governance structure and all plausible candidates for X to check whether the impact of governance structure changes as X varies. The availability of information might conceivably be correlated with rating, issue size, global issues, private placements, or duration. The results indicate that none of these variables interact significantly with governance structure or with the presence of collective action clauses.

This is the econometric approach to addressing selectivity concerns; however, there is also a practical approach. Conversations with Bloomberg staff revealed that the availability of information depends primarily on whether Bloomberg is in possession of the bond documentation, in particular the prospectus. This in turn depends on circumstances which are utterly unrelated to the moral hazard effects of collective enforcement. On practical as well as on empirical grounds, we may therefore conclude with some confidence that the danger of sample selection bias is quite limited.

Fixed effects regressions

So far, the econometric sophistication of the analysis is at the level of Tsatsaronis (1999), the first systematic empirical study on collective action clauses. Eichengreen and Mody (2000) then drew

attention to the issue of endogeneity, which therefore every subsequent study had to address in some way or other. The authors fail to explain the problem in any detail, but the reasoning goes along the following lines: The presence of collective action clauses, as proxied by the choice of governing law, is endogenous to the model because issuers plausibly make a conscious choice regarding the clauses, based on their own creditworthiness. Consequently, there is the potential for two-way causation between spreads and the variable of interest. The very same considerations apply to the present analysis, given the good reasons for issuers to choose the governance structure according to their credit rating, as discussed above.

Eichengreen and Mody's response to endogeneity concerns is to run an instrumental variables approach. In a first step, the choice of governing law is modelled, and the predicted values of that regression are then plugged into the spread equation instead of the true values. This approach was heavily criticised by Becker et al (2001) on several grounds. The authors argue that endogeneity is not that serious a problem and is therefore perhaps best left uncured. If any correction for endogeneity is to be made, then the instrumental variables approach is not the best choice because it tends to inflate the parameter estimates. Becker et al instead favour fixed effects estimation.

The idea behind this solution is to introduce fixed effects at the country level by assigning a dummy variable to each (but one) issuer. Thus, any influences on spreads that are specific to the issuer are held constant so that the focus can be placed on spread differentials between bonds with and without a certain trait for a given set of issuer characteristics. Fixed effects is also the preferred method in our analysis because the instrumental variables approach is costly in terms of data requirements and yet crude unless a very good instrument can be found. Fixed effects implies excluding countries that have persistently issued either with or without trustees. In the present dataset, we are then left with 22 countries with a total of 236 bonds. A distinction between trustees under English and New York law can no longer be made as the number of relevant bonds is too small (9 and 44 bonds, respectively). Table 3 below shows the results.

Dependent Variable: LOG(SPREAD)						
	Model 1		Model 2		Model 3	
CONSTANT	7.96***	(0.21)	7.999***	(0.204)	8.039***	(0.209)
MINOR_CURRENCY	-0.995**	(0.471)	-1.001**	(0.48)	-1.007**	(0.475)
MINOR_CURRENCY*BID_ASK_SPREAD	-0.76***	(0.287)	-0.744***	(0.286)	-0.77***	(0.29)
GLOBAL	0.094*	(0.049)	0.1**	(0.049)	0.219***	(0.043)
SINKABLE	-0.288***	(0.1)	-0.279***	(0.1)	-0.295**	(0.127)
DURATION	-0.019**	(0.008)	-0.02**	(0.008)	-0.026***	(0.01)
TIME_TO_MATURITY	0.025***	(0.008)	0.026***	(0.008)	0.032***	(0.01)
TRUSTEE			-0.067	(0.048)	0.002	(0.043)
CACS					-0.104**	(0.047)
Obs.	236		236		204	
Adj. R^2	0.88		0.881		0.886	
10%-level (*), 5%-level (**) and 1%-level (***) level of significance, two-tailed test. Heteroskedasticity-consistent standard errors in parentheses. 21 country dummies are not reported.						

Table 3: Fixed effects regressions

The 21 country dummy variables are all strongly significant, individually as well as jointly, but are not reported here. A regression on the dummies alone is able to explain more than 76% of the variation in the log of spreads. Model 1 adds a number of control variables to yield a very high adjusted R^2 of 0.88. The set of controls differs somewhat from the baseline regressions. The duration of a bond, time to maturity, and a dummy for sinkable bonds now add significantly to the explanatory power of the model. The rating variable is no longer useful because bonds from a given country almost always carry the same rating.

Trustees are introduced in model 2. As opposed to the baseline regressions, the coefficient is negative though far from significant. When collective action clauses are introduced as a further control variable in model 3, the trustee dummy coefficient becomes indistinguishable from zero. CACs are estimated to have a significant negative impact on spreads (around ten basis points for a country like Brazil), and the coefficient is similar in size to the estimate without fixed effects. Again as a final exercise, the dependent variable was stripped of any influence of liquidity as proxied by bid-ask-spreads to move the interpretation of the spreads away from borrowing costs and towards default risk. As before, this transformation has hardly any impact on the estimates and the results are therefore not reported.

Incidence of Default

Above we have noted the limits of interpreting spread differentials for the purpose of this study. A much more intuitively appealing way of testing for a deterrence effect of individual enforcement rights is to check whether the *likelihood of a bond being in default* depends on its governance structure.²² Surprisingly enough, this simple approach was never used in the parallel literature on collective action clauses even though that literature sought to answer very similar questions.

At the simplest level, we may check for an association between the two dichotomous variables - governance structure and default - by counting the number of bonds in each of the four categories and applying a chi-squared test. The sample for this part of the analysis comprises 554 bond issues, that is, all those whose governance structure is known and that have not matured yet. 17 bonds were listed as being in default, of which six were governed by a trust structure and eleven by a fiscal agency agreement. Of the 537 bonds that were not in default, 95 featured a trustee while the remaining bonds did not. Trustee-governed bonds are evidently overrepresented among the bonds in default. A chi-squared test for independence yields a test statistic of 3.425. Whether one believes default status and trustee status to be independently distributed of each other therefore depends on the choice of confidence level: 5% vs 10%.

Such bivariate analysis is simplistic in that the influence of other factors is not controlled for. Probit regression of a dummy for default status on a set of controls will produce more informative results.

²² Thanks to Daniel Rubinfeld for suggestion this approach. Strictly speaking, though, the probability of being in default at the time of download is again only an approximation of the probability of default, or in other words, of being in default at any point during the bond's life. The two concepts are equivalent only if the *time spent in default* does not differ systematically across different groups of bonds. But since the probability of default and the time spent in default are both 'bads', the distinction is not that crucial from a policy perspective.

Dependent Variable: DEFAULT						
	Model 1		Model 2		Model 3	
CONSTANT	-2.734***	(0.324)	-2.794***	(0.343)	-4.449***	(0.742)
DURATION	0.014**	(0.007)	0.015**	(0.007)	0.075***	(0.019)
GLOBAL	0.799***	(0.309)	0.788**	(0.316)	1.107*	(0.589)
PRIVATE	0.731**	(0.327)	0.689**	(0.323)	0.6	(0.536)
SINKABLE	0.53*	(0.283)	0.475	(0.301)	1.164***	(0.417)
TRUSTEE			0.285	(0.258)	0.851**	(0.427)
CACS					-1.002***	(0.381)
Obs.	554		554		405	
McFadden R ²	0.104		0.112		0.371	

10%-level (*), 5%-level (**) and 1%-level (***) level of significance, two-tailed test.

Table 4: Probit regressions

The relatively small number of defaulted bonds means that a number of promising control variables cannot be used because they exhibit insufficient variation across the default and non-default categories. In consequence, the probit regressions, as summarised in table 4, do not fit the data particularly well. Also, fixed effects estimation is not an option as only four countries have bonds outstanding that are in and out of default, respectively. This is regrettable because this particular set of results offers the most direct interpretation along the lines of the research question.

Model 1 once more includes all control variables whose coefficients are significant. The inclusion of the dummy for trust structures in model 2 shows that such bonds are somewhat more likely to be in default, but the standard error is almost as great at the coefficient itself. A distinction between English and New York style trustees is again not viable because of the small number of relevant cases. Model 3 adds the dummy for collective action clauses, with some impact on the regression output. The CACs dummy adds substantial explanatory power so that the goodness of fit increases to respectable levels. The coefficients on the existing variables also change noticeably. Remarkably, the trustee dummy coefficient is now significant at the five percent level, which confirms that bonds with collective enforcement appear more likely to be in default. The presence of collective action clauses, by contrast, significantly reduces default risk, as evidenced by the strong negative coefficient.

Thus despite the comparatively poor fit of the first two models, the probit regressions actually deliver the strongest results on the variables of interest. The last result is a particularly interesting one because it suggests that collective action clauses are achieving their goal. Not even the most enthusiastic supporters of the clauses would claim that their inclusion in bond contracts might result in fewer defaults – the discussion much rather centred on the question whether defaults would *increase* due to CACs. Instead, CACs promised to enable smoother and speedier restructurings, i.e. to reduce the time a bond would spend in default. For a given default rate, the probability of being in default at any given moment should therefore be lower – which is what we see in the data.

Limitations

It has been mentioned repeatedly that all of the regression results obtained are fairly robust to specification changes, such as the inclusion of further variables. This is true for the control variables to a much greater extent than for the variables of interest, and in particular the trustee dummies. The reason is, as also mentioned, the small number of bonds with trustees, despite the respectable overall sample size – the sample of the Probit model with governance structure and CACs (model 3) includes only ten bonds in default. As a result, the coefficients on the trustee dummies in the various models are not very robust to even minor manipulations of the data. Re-coding one or two of the bonds with the largest residuals from ‘trustee’ to ‘non-trustee’ or vice versa, or from ‘default’ to ‘non-default’ will almost always cause large jumps in the coefficients, and often reverse signs. Such ‘re-coding’ could easily arise unintentionally due to errors in the Bloomberg data or misinterpretation of those data. Furthermore, if the full set of information happened to be available for a different sample of bonds, different outcomes might be obtained even though, as we have argued, there is no systematic bias. All of this is reason to tread with caution when interpreting the regression results.

5 - Conclusion

According to an expert on market opinion, the benefits and moral hazard effects of collective enforcement are currently “not near the top of anyone’s mind”.²³ We suggest that they should be. Collective enforcement’s twin topic, collective action clauses, has received much attention in academic and policy circles during the early 2000s. Here, the argument was made that progress on implementing the clauses was possible only once a sufficient body of empirical evidence had helped overcome concerns about increased moral hazard.

Such evidence was so far completely lacking with respect to trustee usage. This paper is the first to test empirically in a cross-section setting whether individual enforcement rights, as normally found under a fiscal agency agreement, indeed provide a better deterrent against default than the threat of collective enforcement through a trustee. We began by checking for an influence of trustee usage on bond spreads, which may be interpreted as default risk (from the investors’ perspective) or as borrowing costs (from the debtors’). The results indicate a slight but statistically insignificant spread premium for bonds with collective enforcement. With the exception of one particular specification, this also holds true when fixed effects are introduced as a remedy for potential endogeneity.

Interpreting the results becomes much more intuitively appealing when we switch to probit analysis. The probability of being in default is slightly higher for bonds with trustees, and significantly so in what is arguably the best specification. Thus, reassuringly, the two different empirical approaches produce broadly comparable results. Incidentally, this study yields an interesting by-product to supplement the earlier literature on CACs: While the effects of trustee usage are generally not very strong, the presence of the clauses reduces spreads and the probability of being in default, respectively, in all specifications.

The empirical analysis makes no claim to perfection. The limitations have been noted, in particular with respect to incomplete data and the relatively small number of bonds with pertinent characteristics. Firmer conclusions would require a richer data set, as may be available from Bondware, as well as more

²³ Michael Chamberlin in correspondence with the author.

robust econometric techniques, for example in dealing with potential endogeneity or missing information. The questions addressed here deserve the same amounts of resources and expertise as were devoted to the issue of collective action clauses - because trustees are an equally important component of a better international financial architecture. What we can say, though, is that if there were any systematic and pronounced relationship between issuing structure and borrowers' incentives to default, this exploratory investigation would have detected it. Further research may be expected to confirm the innocuousness of trust structures as regards moral hazard.

This paper has focused on issues that are similar to the ones pursued in Hässeler (2008) and therefore the policy implications are also similar: If one believes in the benefits of trust structures, and if one further believes the costs of trust arrangements in terms of moral hazard to be small, which this paper has begun to indicate, then all necessary steps should be taken to establish the appointment of a trustee as the market standard, at least for medium to low rated borrowers. External pressure may be needed to overcome contract stickiness and prejudice in the market. Whatever mix of public sector encouragement, scholarly opinion, etc. worked for the proliferation of collective action clauses should be applied one more time. The New York Stock Exchange could follow the example of London in making the appointment of a trustee a requirement for listing.

At the same time as increasing the frequency of use though, there is a need to improve the drafting quality of trust deeds and indentures. The trustee's duties must be specified in such a way as to ensure its active role in safeguarding the bondholders' interests and to prevent events such as the recent ones in Ecuador from reoccurring.

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