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# Individual Enforcement Rights in International Sovereign Bonds

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## 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, Elliott Associates, Peru, collective action clauses, fiscal agent, trustee

JEL classification: F34, K12, K33

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## 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).<sup>1</sup> 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 Häselser (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. Häselser (2009) provides a comprehensive

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<sup>1</sup> 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.

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 20<sup>th</sup> century. Bradley *et al* (2008) investigate 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 spells out what we mean by individual enforcement rights and where to find them. Section three then offers some theoretical perspectives on IERs. Section four 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 five presents the empirical methodology and results; section six concludes.

## 2 – 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.<sup>2</sup> 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.<sup>3</sup> 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

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<sup>2</sup> Participation rates in recent exchange offers have ranged from 76% (Argentina, 2005) to more than 99% (Ukraine, 2000) (Sturzenegger and Zettelmeyer, 2008).

<sup>3</sup> See Häselser (2009) for a much more detailed discussion of CACs.

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.<sup>4</sup> 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 (Häseler, 2010). The majority of sovereign bonds are traditionally 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.<sup>5</sup>

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.<sup>6</sup> 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 individual bondholders. A US-style trust indenture does not provide for the proceeds from an enforcement action to be shared.

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

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<sup>4</sup> Current estimates suggest that just over half of all outstanding bonds feature CACs. See Häseler (2010) for details.

<sup>5</sup> For more details, see Buchheit and Gulati (2002).

<sup>6</sup> 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.

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 Häselser (2010).

<b>Scope for Individual Enforcement?</b>	<b>CACs</b>	<b>no CACs</b>
<b>Trustee</b>	essentially none (21% / 2%)	severely restricted (6% / 12%)
<b>no Trustee</b>	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.<sup>7</sup> 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 should be sufficiently swift in using CACs for a restructuring to frustrate any enforcement action.<sup>8</sup> 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,<sup>9</sup> 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.

<sup>7</sup> The presence of CACs does not necessarily mean that they will be used; see the case of Pakistan, 1999 (Dixon and Wall, 2000).

<sup>8</sup> 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.

<sup>9</sup> 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.<sup>10</sup> Most vulture suits are successful, resulting in a settlement that yields a large profit for the investment company.<sup>11</sup> 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.<sup>12</sup>

### 3 – 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 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.<sup>13</sup> The result is a loss of welfare for both

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<sup>10</sup> 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 3<sup>rd</sup>, 2010). It must be noted, though, that most vulture action to date is based on claims arising from bank loans, rather than bonds.

<sup>11</sup> 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>.

<sup>12</sup> The 'Stop VULTURE Funds Act' was introduced to the US Congress on June 18<sup>th</sup>, 2009 – see [www.opencongress.org/bill/111-h2932/show](http://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](http://www.guardian.co.uk/business/2009/may/06/vulture-funds).

<sup>13</sup> 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).

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 maintained<sup>14</sup> – 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 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.

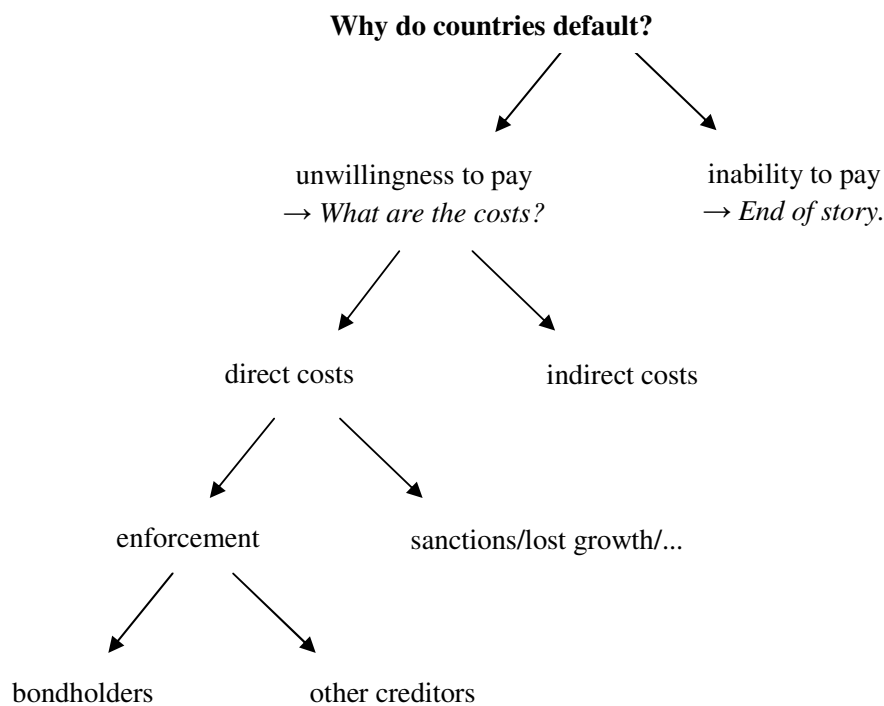


Figure 1: Various views of sovereign default.

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

<sup>14</sup> See, for example, Fisch and Gentile (2004).



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 suggests 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),<sup>15</sup> 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.

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.

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<sup>15</sup> 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.

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.<sup>16</sup> 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.<sup>17</sup> Ideally, the trustee would use its discretionary power to pursue remedies against the 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

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<sup>16</sup> 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.

<sup>17</sup> 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 indemnities, may have conflicts of interest or be subject to political suasion) that make them less effective as litigants than individual holders."

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, 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 realise 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.<sup>18</sup> 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

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<sup>18</sup> Table 3.1 in Sturzenegger and Zettelmeyer (2006b) presents an overview of litigation against sovereign debtors and the associated outcomes.

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 Häselser (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.

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" (G10, 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.

## 4 – *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.<sup>19</sup> 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 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.<sup>20</sup> 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 Elliott 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 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

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<sup>19</sup> 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*.

<sup>20</sup> A slightly more detailed account of the events can be found in Buchheit and Pam (2004).

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 26<sup>th</sup>, 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.<sup>21</sup> 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.<sup>22</sup>

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 reported the downgrade the next day.<sup>23</sup> 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.<sup>24</sup> 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.

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<sup>21</sup> Glenn E. Siegel and Lynn M. Ryan in the April 1999 edition of *The Metropolitan Corporate Counsel*.

<sup>22</sup> "Peru Case a Warning for Ecuador" *Emerging Markets Debt Report*, November 01, 1999.

<sup>23</sup> *The Houston Chronicle* and the *Wall Street Journal*, both on September 20. Further coverage on September 22.

<sup>24</sup> "Peru to Fork Over \$58 Million to Elliott Associates to Avoid Default" *Hedgeworld Daily News*, September 29.

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.”<sup>25</sup> 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”.<sup>26</sup> 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.”<sup>27</sup>

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 forum<sup>28</sup> 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.<sup>29</sup>

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 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

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<sup>25</sup> Quoted in Alfaro et al (2007, p. 22).

<sup>26</sup> *ibid*, p. 1

<sup>27</sup> Salmon, F. (2004) “Elliott Associates’ aggression captures low-risk returns” in *Euromoney*, available at [www.euromoney.com/Article/1001988/Title.html](http://www.euromoney.com/Article/1001988/Title.html)

<sup>28</sup> The article is available at [www.bradynet.com/bbs/latam/100069-0.html](http://www.bradynet.com/bbs/latam/100069-0.html)

<sup>29</sup> See Bradley et al (2008), Gulati and Klee (2001), and Sturzenegger and Zettelmeyer (2006a), amongst others.

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.<sup>30</sup>

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.

## 5 – 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.

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<sup>30</sup> 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*.



### Dependent variables

We primarily rely on percentage changes in J.P. Morgan's Emerging Markets Bond Index Global for Peru (R\_JPMG\_PERU)<sup>31</sup> as the dependent variable. (Hereinafter, series preceded by "R\_" denote variables 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 chose 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"<sup>32</sup> 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

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<sup>31</sup> The construction of the index is described in Kim (2004).

<sup>32</sup> *Euromoney*, October 2000, issue 378, p. 20.

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.<sup>33</sup> Furthermore, a change of government is always associated with the risk that the new administration will use the opportunity to repudiate old debts.

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.<sup>34</sup> 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. 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. Figure 2 graphs the monthly aggregates of the two queries. The series are evidently correlated, though not so strongly as to suggest that they could not be used as controls simultaneously.

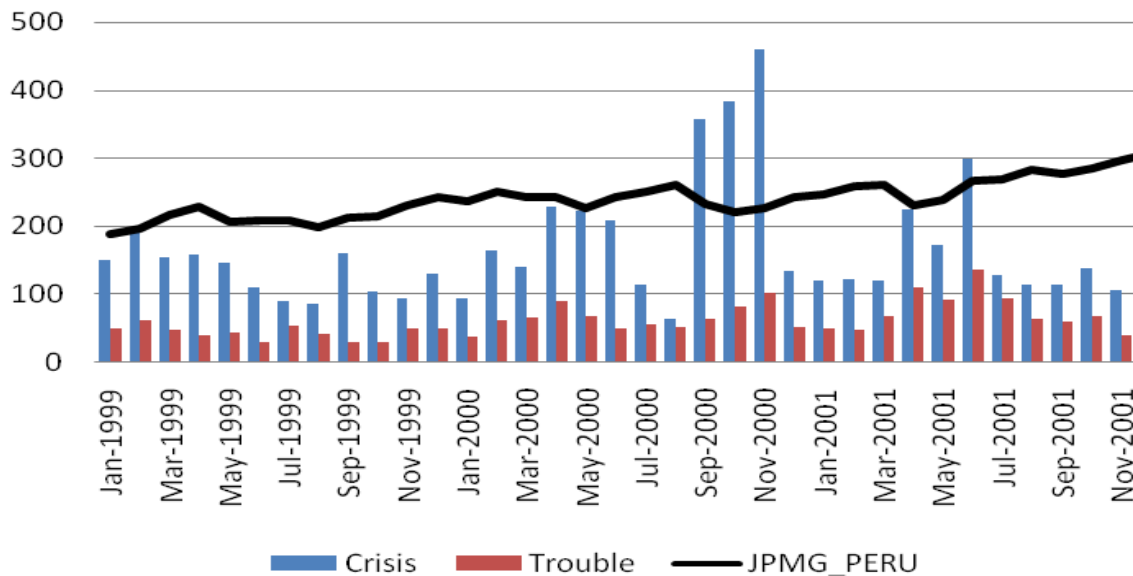


Figure 2: Monthly number of search results for two news queries and end-of-month values for JPMG\_PERU

<sup>33</sup> “Credit firms lower rating on Peru debt” *The Houston Chronicle* on September 20, 2000.

<sup>34</sup> Many thanks to Jonathan Klick for suggesting this approach.

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.<sup>35</sup> The intention is to provide a graphic approach to gauging the bond market effects of *Elliott*, as an alternative to the regression analysis below.

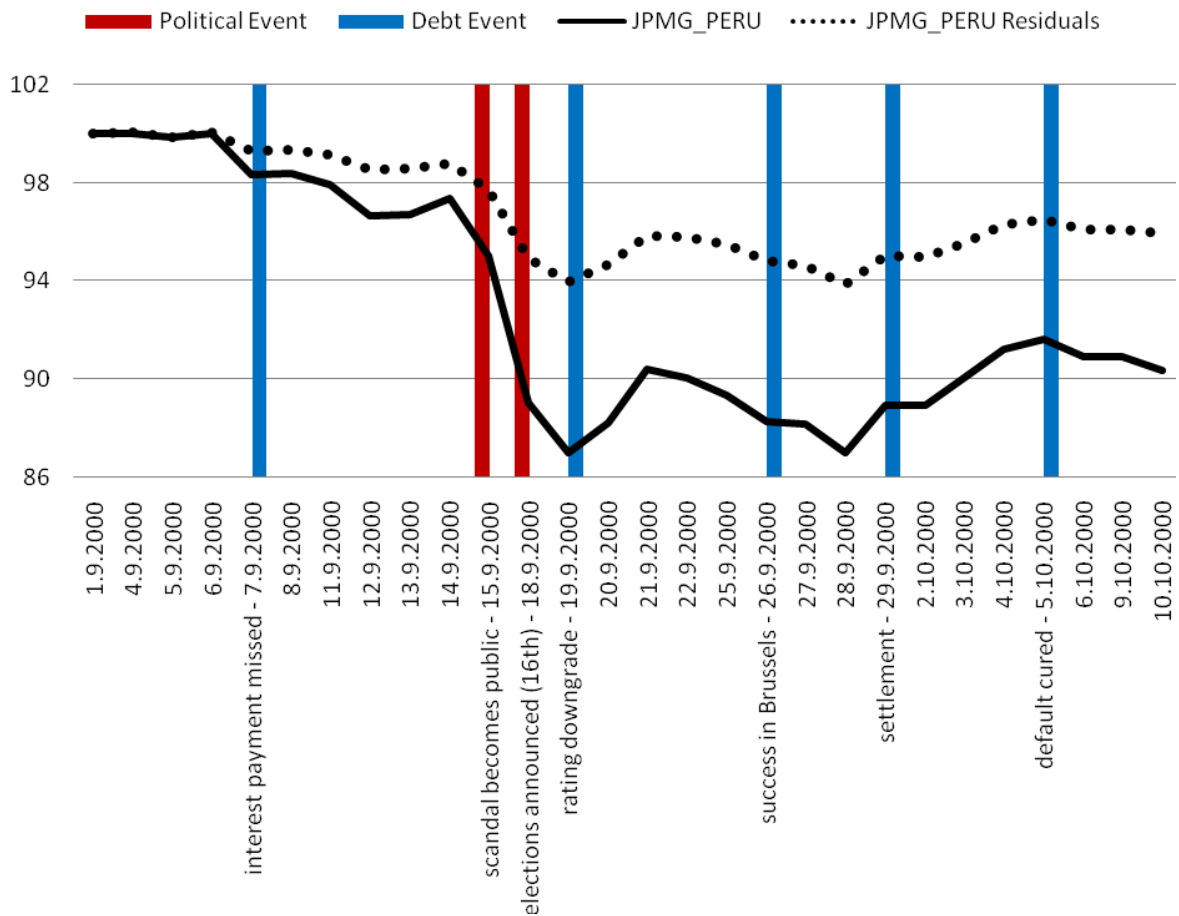


Figure 3: Index of JPMG\_PERU before and after ‘removing’ the influence of political and market events

<sup>35</sup> 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.

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.

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

$$R\_JPMG\_PERU_t = c + \alpha * \Delta_t + \beta * \Omega_t + \delta \Sigma + \epsilon_t,$$

where  $\Delta$  is a vector of bond market-related variables and time series derived from them,  $\Omega$  is a vector of variables that are based on the news queries,  $\Sigma$  is a set of dummy variables for the events, and  $\epsilon$  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 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.

	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

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 CRISIS<sup>2</sup> and TROUBLE.

Changing the dependent variable constitutes perhaps the strongest robustness check. This is done in models 4 and 5 in Table 3.<sup>36</sup>

	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 <sup>3</sup>	–	0.203* (0.109)	–
CRISIS <sup>†</sup>	–	–	0.019** (0.008)
D(CRISIS)	-0.015*** (0.004)	-0.01* (0.005)	–
D(CRISIS) <sup>2</sup>	-0.0004*** (0.0001)	–	-0.0008** (0.0004)
TROUBLE	-0.088*** (0.02)	–	–
TROUBLE <sup>2</sup>	0.011*** (0.001)	–	–
R_UST	–	–	-0.199** (0.091)
PEN	831.3*** (285.1)	–	–
PEN <sup>2</sup>	-1426*** (485.8)	–	–
VIX	–	–	-0.038** (0.015)
VIX <sup>2</sup>	–	-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 <sup>2</sup>	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

<sup>36</sup> 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.

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.<sup>37</sup> 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, 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 <sup>2</sup>	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

<sup>37</sup> See, for example, *Manchester Guardian Weekly*, November 1, 2000: „Hedge fund vultures find rich pickings“; *Latin Trade*, March 2000: "Carrion 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"



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 legal action against sovereign borrowers before.<sup>38</sup> 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.

## 6 – 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.

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<sup>38</sup> *The St. Petersburg Times*, June 8, 1999: "Who Is Kenneth Dart?"

The most pressing need for further research, however, relates to the optimal design 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.

## Bibliography

- Alfaro, L., N. Maurer, and F. Ahmed (2008) "Gunboats and Vultures: Market Reaction to the 'Enforcement' of Sovereign Debt" working paper, Harvard Business School, <http://economics.rutgers.edu/dmdocuments/Gunboats.pdf>
- Borensztein, E. and U. Panizza (2008) "The Costs of Sovereign Default" IMF Working Paper 08/238
- Buchheit, L.C. (2007) "Supermajority Control Wins Out" *International Financial Law Review* 26(4):2
- Buchheit, L.C. and J.S. Pam (2004) "The Pari Passu Clause in Sovereign Debt Instruments" working paper, [www.law.georgetown.edu/international/documents/Pam.pdf](http://www.law.georgetown.edu/international/documents/Pam.pdf)
- Buchheit, L.C. and G.M. Gulati (2000) "Exit Consents in Sovereign Bond Exchanges" *University of California Law Review* 48: 59-84
- Buchheit, L.C. and G.M. Gulati (2002) "Sovereign Bonds and the Collective Will" *Emory Law Journal* 51:1317
- Buchheit, L.C. and G.M. Gulati (2009) "The Coroner's Inquest" *International Financial Law Review* 29(9): 22-25
- Buchheit, L.C. and E. Karpinski (2006) "Grenada's Innovations" *Journal of International Banking and Regulation* 4:227-231
- Bulow, J. and K. Rogoff (1987) "A Constant Recontracting Model of Sovereign Debt" University of Wisconsin: Social Systems Research Institute Working Paper no. 8711
- Bulow, J. and K. Rogoff (1988) "Sovereign Debt: Is to Forgive to Forget?" NBER Working Paper no. 2623
- Bradley, M., J.D. Cox, and G.M. Gulati (2008) "The Market Reaction to Legal Shocks and Their Antidotes: Lessons from the Sovereign Debt Market" working paper, Institute for Law and Finance, Frankfurt University, [www.ilf-frankfurt.de/uploads/media/ILF\\_WP\\_087.pdf](http://www.ilf-frankfurt.de/uploads/media/ILF_WP_087.pdf)
- Bratton, W.W. and G.M. Gulati (2003) "Sovereign Debt Restructuring and the Best Interest of Creditors" Georgetown University Law Centre, Working Paper No. 387880
- Dixon, L. and Wall, D. (2000) "Collective Action Problems and Collective Action Clauses" *Financial Stability Review* 8:142-151
- Dooley, M.P. (2000) "Can Output Losses Following International Financial Crises Be Avoided?" NBER Working Paper no. 7531
- Fisch, J.E. and C.M. Gentile (2004) "Vultures or Vanguard? The Role of Litigation in Sovereign Debt Restructuring" *Emory Law Journal* 53(1043):1047-1116
- Gulati, G.M. and K.N. Klee (2001) "Sovereign Piracy" *The Business Lawyer* 56:635-51
- Grande, A. and D.C. Parsley (2005) "News Spillovers in the Sovereign Debt Market" *Journal of Financial Economics* 75(3):691-734

- Group of Ten (2002) “Report of the G-10 Working Group on Contractual Clauses”, Bank for International Settlements, Basel.
- Häseler, S. (2009) “Collective Action Clauses in International Sovereign Bond Contracts – Whence the Opposition?” *Journal of Economic Surveys* 23(5):882-923
- Häseler, S. (2010) “Trustees versus Fiscal Agents and Default Risk in International Sovereign Bonds“ *German Working Papers in Law and Economics*, [www.bepress.com/gwp/default/vol2010/iss1/art1](http://www.bepress.com/gwp/default/vol2010/iss1/art1)
- Inter-American Development Bank (2006) “The Costs of Default”, chapter 12 of *Economic and Social Progress Report 2007*, [www.iadb.org/res/ipes/2007](http://www.iadb.org/res/ipes/2007)
- Kahan, M. (2002) “Rethinking Corporate Bonds: The Trade-Off between Individual and Collective Rights“ *NYU Law Review* 77(4):1040-1087
- Kim, G.M. (2004) "EMBI Global and EMBI Global Diversified: Rules and Methodology" J. P. Morgan Securities Inc., [http://data.cbonds.info/indexdocs/g\\_eng\\_37.pdf](http://data.cbonds.info/indexdocs/g_eng_37.pdf)
- Miller, M. and D. Thomas (2006) “Sovereign Debt Restructuring: the Judge, the Vultures and Creditor Rights”, *The World Economy* 30(10)
- Moser, C. (2007) “The Impact of Political Risk on Sovereign Bond Spreads - Evidence from Latin America”, Proceedings of the German Development Economics Conference, Verein für Socialpolitik, Göttingen
- Roe, M.J. (1987) “The Voting Prohibition in Bond Workouts“ *The Yale Law Journal* 97(2):232-279
- Rose, A.K. (2005) “One Reason Countries Pay Their Debts: Renegotiation and International Trade” *Journal of Development Economics* 77(1):189-206
- Scott, H.S. (2006) “Sovereign Debt Default: Cry for the United States, Not Argentina” Washington Legal Foundation Critical Legal Issues Working Paper No. 140, [www.wlf.org/upload/Scott%20WP%20Final.pdf](http://www.wlf.org/upload/Scott%20WP%20Final.pdf)
- Sturzenegger, F. and J. Zettelmeyer (2006a) “Has the Legal Threat to Sovereign Debt Restructuring Become Real?” working paper, Universidad Torcuato Di Tella, <http://econpapers.repec.org/paper/udtwpbsdt/legalthreat.htm>
- Sturzenegger, F. and J. Zettelmeyer (2006b) *Debt Defaults and Lessons from a Decade of Crises*. Cambridge, MA: MIT Press
- Sturzenegger, F. and J. Zettelmeyer (2008) “Haircuts: Estimating Investor Losses in Sovereign Debt Restructurings, 1998 – 2005” *Journal of International Money and Finance* 27(5):780-805