

Title Sheet

Evolution or Intelligent Design? The Variation in *Pari Passu* Clauses

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Abstract

Standard contract doctrine presumes that sophisticated parties choose their terminology carefully because they want courts or counterparts to understand what they intended. The implication of this “Intelligent Design” model of behavior is that courts should pay careful attention to the precise phrasing of contracts. Using a study of the sovereign bond market, we examine the Intelligent Design model as applied to standard-form contracting. In *NML v. Argentina*, federal courts in New York attached importance to the precise phrasing of the boilerplate contracts at issue. The decision was promptly condemned in the industry for its supposedly erroneous mode of contract interpretation. Utilizing data on how industry contracting practices responded to the decision, we ask whether the market response indicates that parties in fact intended for the small variations in their contract language to embody a particular meaning. We find the data supports a model closer to random evolution rather than intelligent design.

Evolution or Intelligent Design? The Variation in *Pari Passu* Clauses

Stephen J. Choi, Mitu Gulati & Robert E. Scott*

I. Introduction

The recent case of *NML Capital v. Republic of Argentina* in the Southern District of New York (SDNY) is perhaps the most important case in the history of the sovereign debt markets. The core of the *NML* case was a dispute over the meaning of the now infamous *pari passu* clause in the Republic of Argentina's bond covenants: a relic of a standardized contract term dating back at least to the 1830s that almost no one in the sovereign debt markets seemed to understand (Gelpern 2016; Chabot & Gulati 2014). Despite the lack of market understanding, the SDNY ruled that the *pari passu* clause had a particular meaning, requiring that the sovereign must make "ratable payments" to all bondholders holding that clause, including those holdouts who refused to participate in Argentina's debt restructuring.¹ While market participants lacked any common understanding on what the *pari passu* clause meant, there nonetheless was widespread agreement that the term *did not mean* what the SDNY court said that it meant. The ratable payments interpretation gave holdout creditors a potent weapon against Argentina in a market where creditors have rarely had effective means of collecting against deadbeat sovereign debtors (Buchheit & Gulati 2016). The end result of the courts unexpectedly giving creditors this weapon has been a substantial expenditure of public resources on a variety of reform efforts. These costs are particularly evident in the efforts of the International Monetary Fund (IMF), the U.S. Treasury, the Paris Club and other international governance bodies to coordinate widespread reform of the *pari passu* clauses so that courts will not again interpret standard form boilerplate in ways that depart so drastically from market understandings.

* Faculty at NYU, Duke and Columbia University law schools, respectively. For comments, thanks to Anna Gelpern, Marcus Miller and participants at the CIGI-University of Glasgow 2016 Sovereign Debt Research Conference. We borrow part of our title from Mark Wright, who posed the question "Evolution or Intelligent Design?" in a 2011 article on the *pari passu* clause in sovereign bonds.

¹The SDNY interpretation was subsequently affirmed (twice) by the Second Circuit Court of Appeals, the most important commercial court in the U.S. See *NML Capital, Ltd. v. Republic of Argentina*, 2011 WL 9522565, at *2; *NML Capital, Ltd. v. Republic of Argentina*, 699 F.3d 246 (2d Cir. 2012).

Undoubtedly, revising the language of the *pari passu* clause to clarify its meaning will reduce the likelihood that future courts will misinterpret this particular boilerplate term. But the task of changing the language of a boilerplate term may face significant inertia costs. Change may take a long time to accomplish, imposing costs in the interim on the entire market. Moreover, the problem of courts misinterpreting mass-market contracts potentially extends beyond the *pari passu* clause to many other boilerplate clauses. Boilerplate clauses provide the value of standardization to market participants, allowing market participants in heterogeneous circumstances to develop a uniform, well-understood set of legal rights and obligations governed by the boilerplate clauses. The repeated use of boilerplate clauses over time, however, may lead to a loss of meaning in at least two ways (Goetz & Scott 1985).

First, over time some standardized terms are repeated by rote so consistently that they lose their meaning: they become a ritualized incantation (termed “rote usage”). The rote usage problem arises because some terms become through continuous repetition an essential element of the template that contracting parties expect to be present in all standard contracts of a particular type or in a specific market. These rote usage terms remain in the boilerplate because parties see no reason to eliminate a term they view as costless and thus incur a risk, however small, of jeopardizing the understood meaning of their agreement. Unfortunately, habitual reliance on standard templates exacerbates the problem: since the terms are part of the standard “check list” of essential terms they are included without bargaining and are rarely if ever tested in legal proceedings. Once a term becomes an essential part of a package of terms that signals a standard set of contractual rights and obligations, rote usage accelerates, thereby leading ultimately to loss of meaning.

“Encrustation” is a second cost of too much repetition: the intelligibility of language deteriorates significantly as legal jargon is overlaid in particular deals on standard linguistic formulations. Minor variations may occur for any boilerplate term, but once a term becomes rote and is incorporated as part of a “check list” of essential terms, contracting parties are less motivated to focus on and correct random variations that may appear. In boilerplate or standard-form contracts that generations of drafters copy and slightly modify from prior deals, such as the case with sovereign bond covenants, boilerplate terms that have lost apparent meaning will often

use slightly different phrasing owing to encrustation. To take an example, a standard feature of a sovereign bond is a promise on the part of the issuer to have the bonds listed, after issuance, on an international exchange. Since the issuer cannot guarantee the listing (since the exchanges are independent entities), it can only promise that it will do its best to obtain a listing for the bonds. So, hypothetically, the bond contracts might promise that the issuer will “endeavor” or exert “efforts”, “reasonable efforts”, “best efforts”, “reasonable best efforts”, “high efforts” or some other formulation. If a dispute arises over the issuer’s attempts to secure a listing, the question is how should the court treat these different formulations: do they embody a single obligation (customary efforts) or do different formulations specify different obligations (does “best efforts” require more effort than “reasonable efforts” that, in turn, requires more than “reasonable best efforts”)?²

If the phenomenon of boilerplate terms without apparent meaning extends beyond the *pari passu* clause, then repairing the *pari passu* clause will do little to reduce the resulting social costs: contract arbitrageurs will find other language within the standard sovereign debt contract whose meaning has been largely forgotten and seek to exploit the linguistic uncertainty to gain a strategic advantage. Consequently, courts will inevitably face the challenge of selecting the interpretive rules that best reduce the social costs of terms that appear to have lost their meaning (Choi, Gulati & Scott 2016a).

How should a court handle variation in the language of long-standing standard form contract terms that have largely lost an apparent meaning? As a matter of ordinary contract interpretation, courts are instructed to give effect to the *ex ante* intentions of the parties.³ Since the contracting parties are in the best position to articulate their purposes, presumably their explicit words at the outset of the contracting relationship are the best evidence of what they intended. Thus, to continue the example, if the contracting parties said “best” instead of “reasonable,” presumably they had a reason, and the court, to the extent possible, is charged with giving content to that reason. This traditional model of contract formation and interpretation

² See, e.g., Offering Circular, Republic of Ecuador, Offer to Exchange (July 27, 2000), at p. 117 (promising “best efforts”); Offering Circular, Republic of Ecuador, \$1,000,000,000, 10.75% Notes Due 2022 (July 28, 2016), at p. 12 (promising “reasonable best efforts”).

³ Intention is determined objectively and prospectively: A party is taken to mean what a contract partner could plausibly believe it meant when the parties contracted. See Schwartz & Scott (2003).

conceptualizes parties as understanding their objectives and tailoring their contracts as best they can to achieve specific goals (subject to any constraints they may face). In other words, contract terms are the product of “intelligent design:” parties are rational actors who knowingly formulate the contract terms that best achieve their goals and will revise terms in subsequent transactions if the words they employ are interpreted in ways that frustrate those goals. This model, the backbone of traditional contract law, is our starting point (the “Intelligent Design” model). In the context of the *pari passu* clause, variation under the Intelligent Design model represents different tradeoffs between sovereigns and sophisticated investors. On the one hand, giving issuers an easier ability to restructure debt may enhance moral hazard risk if issuers are motivated to act less responsibly. On the other hand, giving holdout creditors more leverage over the issuer may reduce ex ante moral hazard incentives but scuttle even more value-increasing restructurings ex post.

Against the Intelligent Design model, we test an alternate model of contract: of *tinkering* as opposed to *tailoring*. In this competing model, standard boilerplate contracts produced for individual deals are not created out of whole cloth or even carefully shaped from precedents every time a new deal is done. Instead, in markets that rely on standard contracts, drafters copy new deals largely from prior deals or industry standard forms (Davis 2010; Richman 2011; Anderson & Manns 2016). Even so, marginal modifications to the standard form boilerplate are required to meet the needs of the transaction: thus, agents (principally, law firm associates) charged with the drafting responsibility but ignorant of the function of the boilerplate terms tinker with the boilerplate language at the margins. Thereafter, if the parties include these boilerplate terms simply to satisfy standard practice and not because they attach independent substantive meaning to the terms, the principals are not motivated to monitor the agents’ actions (Gulati & Scott 2013). In this way, the new language evolves as the “new” standard, leading to encrustation. The modified standard is then reused in future deals and incorporated into the next generation of boilerplate terms (the “Evolutionary” model). In this Evolutionary model, it would not be surprising to find terms that become part of the standard template and are then rendered meaningless through largely unthinking repetition. This lost meaning becomes even more difficult to recover when, through the tinkering process just described, the terms also become encrusted with meaningless legal jargon (Goetz & Scott 1985).

It matters which model a court adopts when interpreting changes in boilerplate terms in commercial markets. The Intelligent Design model, for example, advises the court to give different effect to the “reasonable efforts,” “best efforts” and “reasonable best efforts” variations (they are all carefully tailored linguistic variations). By contrast, the Evolutionary model advises the court to entertain the significant possibility that “reasonable efforts,” “best efforts” and “reasonable best efforts” variations might all mean just one thing—“customary effort.” Where a boilerplate term has lost meaning and an evidentiary vacuum exists on the meaning as a result, the chances of a court that takes an Intelligent Design approach making an aberrant interpretation are greatly increased as compared with a boilerplate term with well-known meaning. The market may have largely overlooked the function of a meaningless contract clause prior to litigation over its meaning. However, the market will thereafter develop views on how the court’s interpretation affects the parties’ contractual distribution of rights and obligations. And to the extent a contract clause in fact had no meaning or function prior to the interpretation, the court’s interpretation will likely upset this distribution in unexpected and negative ways.

The *pari passu* litigation that is the centerpiece of our inquiry raised this precise issue. The *pari passu* clause, a staple of sovereign bond instruments for at least a century and a half, exists today in at least four separate formulations: the sovereign bonds at issue will alternately rank, with the sovereign’s other debt, *equally* (termed “Rank Equally”), *equally in right of payment* (termed “Rank Equally in Payment”), or *equally and be payable as such* (termed “Pay Equally”). In a fourth formulation, the sovereign bond instrument includes one of the prior three versions with an attached “*except as subject to mandatory law*” (termed “Mandatory Law”). Despite these variations, one variation has the longest history—the Rank Equally version of the clause that makes no mention of payments to creditors (Buchheit & Pam 2004; Weidemaier, Scott & Gulati 2013, Figure 1).

In *NML v. Argentina* (and in an earlier opinion in Brussels, *Elliott v. Peru*,⁴ also interpreting the meaning of *pari passu*), the judges, at different stages of the litigation, decided

⁴ Elliott Assoc. No. 2000QR92 (Ct. App. Brussels, 8th Chamber, Sept 26, 2000.).

that the Rank Equally in Payment clause meant something different from the traditional Rank Equally formulation. Put in the language of our project, here was the question before the court: Was the variation from the initial Rank Equally version of the clause mere evolutionary tinkering or did this variation represent intelligent design? As industry insiders explained it, the original formulation under the Rank Equally clause (to the extent the clause retained any meaning at all) was only a constraint on the sovereign passing a statute legally subordinating a creditor vis-à-vis other creditors of the same rank (Burn 2013; Buchheit & Pam 2004; Wood 2003). But both the earlier Brussels and later New York courts ruled that Rank Equally in Payment had to mean something different from just Rank Equally—after all, the contracting parties had added the words “in Payment” to the traditional Rank Equally formulation. Treating Rank Equally and Rank Equally in Payment as creating different legal obligations is consistent with the Intelligent Design model.

In treating the Rank Equally clause and the Rank Equally in Payment clauses differently, these courts also did something that turns out to help our empirical analysis: they interpreted the Rank Equally in Payment clause as being the same as (or something close to) the Pay Equally version of the clause.⁵ So, while the courts rejected the Evolutionary model by giving meaning to the difference in wording between the Rank Equally and Rank Equally in Payment clauses, they also (perhaps inadvertently) implicitly suggested that Rank Equally in Payment was the same as Pay Equally (despite the difference in wording). Thus, the ruling, while pushing in the direction of the Intelligent Design model by giving meaning to some differences in language among clauses, was not fully consistent with it by ignoring certain other differences in language. (since the pure Intelligent Design model says that each version of the clause has a distinct and different meaning).

To summarize, the courts adopted a position close to (albeit, not exactly) the Intelligent Design model, which follows from the traditional doctrinal view that contracts written by sophisticated parties are precisely and intentionally tailored. Important for purposes of our

⁵ One might plausibly read the *NML* court’s decision as having pushed the Rank Equally in Payment clause in the direction of the Pay Equally clause, but not made them precisely the same. In particular, *NML v. Argentina* can be read as saying that the ratable payments interpretation applies to the Rank Equally in Payment clause only under those circumstances where the sovereign engages in misconduct vis-à-vis its creditors. (Buchheit & Gulati 2016).

project is that this particular interpretation allows us to examine how the markets reacted to the courts' decisions and to ask whether the variations in the formulations of *pari passu* that existed prior to the courts' interpretation of the clause were tailored or tinkered. If the Evolutionary model is correct, we expect contracting parties to respond, after a period of inertia, to the courts' interpretation by repairing the variation in the contracts and returning to the original Rank Equally version of the clause as the market standard. If the Intelligent Design model is correct, we expect either no change after the SDNY opinion (assuming the courts correctly identified the market's preferred variation) or limited changes, perhaps after a delay due to some inertia costs, to reintroduce desired variation in the terms.

Our paper reports on an investigation of this question and finds almost all of the evidence pointing in the direction of tinkering (the Evolutionary model). That begs the question whether the traditional assumptions of contract interpretation should be modified, particularly in the context of standard form contracting. Had that happened in the *pari passu* context, the global financial system would have saved a substantial amount of social costs.

II. Data and Coding

To unpack the Evolutionary versus Intelligent Design question, we assembled by hand a unique dataset of all available sovereign bonds issued after the SDNY decision in December 2011. Since it is possible that some market participants knew about the arguments being made prior to the decision—the briefs were part of the public record—and might have predicted the case outcome, we also collected data from roughly six months prior to the SDNY decision (from June 1, 2011). The dataset runs from June 1, 2011 to May 30, 2016, giving us five years of data.

For data sources, we used Thomson One Banker and Perfect Information, the two primary public sources that make available documentation on public debt offerings. We supplemented gaps in the foregoing, particularly on prices and maturities, with information from DCM Analytics. Absent from our data are the strongest issuers, the U.S., U.K., Netherlands, Japan, Germany and France (traditional AAA issuers) because their credit is so strong that they do not use traditional sovereign bond contracts to sell their bonds.

Our data collection produced a dataset of 865 sovereign bond offerings from 87 different sovereign issuers. These were all issuers who at some stage, before or after the case that is our focus, had used a *pari passu* clause in their sovereign bonds (since our goal was to examine how these clauses had changed in response to the court decision in New York). For our analysis, we focused only on sovereign bond offerings under foreign law such as New York or English law—those are the bond offerings that pose the greatest risk of holdout creditors utilizing the *pari passu* clause in a restructuring.⁶ Limiting the dataset to foreign law offerings left us with a dataset of 718 sovereign bond offerings from 84 different sovereign issuers.

Using the SDNY interpretation (and the Intelligent Design model) as a baseline, we coded the *pari passu* provisions for every issuance in terms of the presumed impact of the variations in contract language on the risk a particular *pari passu* clause poses of holdouts interfering with a restructuring. We divided variations into two categories: a) those that resulted in a major shift in the risk of holdouts (“Major” shift—which usually entailed a direct change to the core language of the *pari passu* clause), and b) those that only attempted to augment the evidentiary record on the meaning of an existing term without directly changing the language of the term which we posit will have only a minor impact on the risk of holdouts (“Evidentiary” shift).

1. Major Shifts in Pari Passu Risk

The first type of Major shift derives from variations in the core language of the *pari passu* clause itself. Our baseline for each bond was the version of the clause that the issuer in question was using before June 1, 2011. From that baseline, we examined the changes subsequently made.

The traditional and oldest version of the *pari passu* clause states something along the following lines:

⁶ Bonds under local laws have little vulnerability to holdouts, since the sovereign debtor can simply alter the law ex post.

The notes rank and will rank without any preference among themselves and pari passu with all other unsubordinated public external indebtedness of the Republic.

We term this traditional version the “Rank Equally” *pari passu* clause (for details on the history, see Weidemaier, Scott & Gulati 2013). We classify the Rank Equally clause as posing a low risk of holdouts. The Rank Equally clause importantly does not refer to “payment” in its “rank without any preference” language. Prior to the *pari passu* litigation, eminent practitioners had freely acknowledged puzzlement over why this boilerplate clause was ever used in a sovereign debt instrument (e.g., Buchheit & Pam 2004 (citing numerous sources)). The concept of “rank” has a meaning in a domestic bankruptcy context, where a judge supervises the division of the debtor’s limited assets among creditors of different rank. Creditors who are of equal or *pari passu* rank share equally once the creditors senior to them are paid. But sovereigns do not and cannot enter a judge-supervised bankruptcy procedure. There is no procedure to divide the assets of an insolvent sovereign. The clause, these practitioners opined, was meaningless boilerplate; a holdover from a distant era when its inclusion in these sovereign instruments might have made more sense. Prior work suggests why the clause might have benefitted creditors in the era of gunboat diplomacy in the 1800s (Gulati & Scott 2013). With the gunboats, the foreign creditors would occupy the debtor’s ports (where the tax revenues arrived) and, in effect, liquidate the assets. Yet, when two of us interviewed sovereign bond market participants, almost no one among the parties to the current transactions seemed aware of that earlier interpretation nor, more importantly, did anyone seem to care (Gulati & Scott 2013; Choi, Gulati & Scott 2016b). From the viewpoint of the contemporary market participants, *pari passu* was precisely the kind of boilerplate that over the years had lost its meaning as a consequence of rote usage and encrustation.

Over the roughly 200 years that the clause has been found in debt instruments, the original Rank Equally form developed variations (encrustations); lawyers added and subtracted a word or two here and there in the clause, perhaps trying to clarify the language without fully understanding what function the clause was designed to serve.

One of the deviations from the standard form that appeared in the 1990s provides that each creditor will be entitled to ratable payments.⁷ For example, immediately prior to our sample period in 2010, Italy, in its New York law bonds, employed a *pari passu* clause that stated that:

*The Securities are the ... unsecured obligations of Italy and will rank equally with all other . . . unsecured and unsubordinated general obligations of Italy for money borrowed.... Amounts payable in respect of principal of (and interest on) the Securities will be charged upon and **be payable** out of the [Treasury of Italy], **equally and ratably** with all other amounts so charged and amounts payable in respect of all other general loan obligations of Italy.*

We term this version of the clause that provides for explicit ratable payments, the “Pay Equally” *pari passu* clause. The Pay Equally clause poses a high risk of holdouts: this was the meaning of *pari passu* the holdouts were arguing for in the Argentine and Peru litigations (where the clauses were not explicitly of the Pay Equally variety).

Sometime in the 1980s, another variation of the clause began to promise investors something along the following lines:

*The bonds rank and will rank **pari passu in right of payment** with all other unsecured and unsubordinated External Indebtedness of the debtor.*⁸

⁷ A natural question to ask here is why this variation took so long to appear (if one starts the *pari passu* evolution clock in the mid to late 1800s). One answer to this question comes out of the data on how the clause evolved that is reported in Weidemaier, Scott & Gulati (2013). What they report is that the *pari passu* clause, while widely used in the 1800s and early 1900s, was not ubiquitous – and probably had some meaning (particularly in the context of gunboat diplomacy). Then, after World War II, the markets were largely dead for a period of about 40 years and reappeared only in about the late 1980s. It is at this point that both eminent commentators begin saying that they don’t understand why the clause is being used in sovereign instruments and the clause becomes ubiquitous (moving from being used in 20-30% of all externally issued sovereign bonds in the early 1900s, to in over 90% in the 1990s). From the foregoing, we conclude that tinkering (and then encrustation of the legal jargon) begins to take place when the clause becomes rote and ubiquitous.

⁸ For details on the evolution of these different clauses and their risk levels, see Buchheit & Martos (2014); Weidemaier, Scott & Gulati (2013).

We term this version the “Rank Equally in Payment” *pari passu* clause. Prior to 2011, the Rank Equally in Payment clause posed an uncertain risk of holdouts. On the one hand, the Rank Equally in Payment clause used the word “payment” which, read literally, seemed to imply that holdouts would have a greater ability to obtain equal payments compared with the Rank Equally version of the clause. On the other hand, the Rank Equally in Payment version did not specify “ratable” payments unlike the Pay Equally formulation. The Rank Equally in Payment variation therefore sits somewhere in between the Rank Equally and Pay Equally versions of the *pari passu* clause. This created some uncertainty whether a court would treat it more like the Rank Equally version (low risk) or more like the Pay Equally version (high risk), leading to what one might view (in expectation terms) as a medium risk version of the clause (Kahan & Leshem 2016).

The Rank Equally in Payment clause was the version of the *pari passu* clause seized upon by the hedge fund, NML Capital, in the case against Argentina. The leading practitioners might not have understood what Rank Equally in Payment meant, but NML Capital argued that it knew the meaning: a sovereign debtor in arrears to creditors, its experts explained, had to pay the creditors who ranked “*pari passu in right of payment*” on a pro rata basis (Cohen 2011; Blackmun & Mukhi 2010). Further—and this was important given that a court’s order to pay is largely meaningless against a sovereign debtor—the clause allegedly entitled a creditor who was not paid its pro rata share to an injunction against other creditors who were paid that share (Weidemaier & Gelpern 2013).

A final variation, ignored in the early research on this topic, incorporates a term that subjects the *pari passu* clause to the application of mandatory local law (the “Mandatory Law” clause).⁹ In these bonds, words such as “except as subject to provisions of mandatory law” supplement the standard *pari passu* language. In effect, the sovereign with this clause in its bonds may simply change its local law to forbid the payment to holdout creditors.¹⁰ The Mandatory Law clause accordingly provides the lowest risk of holdouts. Table 1 depicts the four

⁹ Among the handful of explorations of this version of the clause are, Triana (2015) & Cotterill (2015).

¹⁰ The claim that this is the lowest risk formulation of the clause has not been tested in court, but we think likely to be the case if a court follows the Intelligent Design model.

different variations of *pari passu* clauses in our dataset and (assuming Intelligent Design) the risk of holdouts each variant represented both prior to and after the SDNY decision.

Table 1

Type of Pari Passu Clause	Pre-SDNY Holdout Risk Level	Post-SDNY Holdout Risk Level
Pay Equally	High	High
Rank Equally in Payment	Medium	High
Rank Equally	Low	Low
Mandatory Law	Lowest	Lowest

2. Evidentiary Shifts to the Pari Passu Clause

Sovereign issuers also made a set of more minor changes during the period of our study that were designed to affect the weight of evidence on the meaning of existing clauses (Evidentiary shifts). We call these changes are minor because they have a lower likelihood of effecting a court's interpretation than would a direct change to the core language of the clause. As we discuss more fully below, the impact of an Evidentiary shift depends on the existing stock of evidence on the meaning of a term. Where the meaning of a boilerplate term is well known, there is likely a wealth of evidence as to its meaning, reducing the incremental value of the parties trying to add to the background evidence on the meaning of the clause (what we call an Evidentiary shift). We expect Evidentiary shifts to occur primarily where the meaning of a boilerplate term has diminished over time due to rote usage and encrustation such that the Evidentiary shifts will have greater influence on a future court's interpretation of the term. Moreover, contracting parties may be reluctant to change the actual language of a meaningless term when they cannot offer a plausible alternative to the aberrant interpretation due to acontextual nature of the meaningless term. Parties will face significant uncertainty about how courts will respond to any direct changes they make to a term. One fear is that courts will use the new clause as evidence that the pool of existing clauses means something different from the new clause. Change to the contract language that closes off holdouts in a newly issued bond

might put unrevised clauses in prior bonds of that sovereign at greater risk of enabling holdouts. These “legacy debt” costs increase as does market uncertainty: until the revised term is tested in litigation, there is greater uncertainty over how courts will interpret what had been an essentially “empty” term. For meaningless terms, therefore, parties may instead choose an Evidentiary shift.

The first category of Evidentiary shifts we identified was the use by sovereigns of a “patch.” Here the sovereign does not change the language of the core *pari passu* clause itself but instead adds a disavowal of a particular meaning of the clause. In particular, some sovereigns inserted supplementary language in the bond documentation that purported to explain that the clause *did not mean* that a creditor was ever entitled to ratable payments with other creditors of equal rank. In theory, it was also possible that some issuers might have included language explicitly endorsing the ratable payments interpretation of the Rank Equally in Payment version of the clause (or indeed of the Rank Equally version of the clause), but there were no such cases in the data.

A second, and more passive, Evidentiary shift involves reporting to investors (usually in the risk disclosure section of the prospectus) that the *pari passu* clause in the contract posed a risk of a particular, disfavored interpretation for investors. Brazil, for example, made such a report to investors in the risk disclosure section of its July 2014 prospectus supplement. Some issuers took a more aggressive approach in their risk disclosures. In a bond for Honduras in March 2013, the drafter used a risk disclosure that moved toward disavowing the ratable payments interpretation, but nonetheless still left the actual language of the *pari passu* clause unchanged (For details on the Honduran and Brazilian disclosures, see Choi, Gulati & Scott 2016b).

To reiterate our point about these changes being evidentiary, one might ask: What use would such a statement be to a future court trying to discern the meaning of *pari passu*? Doctrine tells us that the foregoing statements add little or no value to a court’s ability to recover the shared meaning of a boilerplate clause. For an ordinary boilerplate term, where the evidence of meaning is both plain and contemporaneous with the drafting of the contract, adding

evidentiary assertions after the fact is likely to have only marginal value.¹¹ The core of contract interpretation is, after all, the language of the contract clause itself and not extraneous statements by one of the parties. In the case of a boilerplate term with a forgotten or unknown meaning, however, adding evidence of a party's understanding may help sway a court as well as market participants.

III. Theory and Predictions

In theory, one could test the Evolutionary and Intelligent Design models by simply observing the impact on contracting behavior of a court interpreting contracts, say, with “best efforts” and “reasonable efforts” terms as having the same meaning. If the parties intended the terms to capture different degrees of effort, consistent with Intelligent Design, we should see either no change (because the market agrees with the judicial meaning now attached to the variation in terms) or, alternatively, we should observe modified contracts that clarify the meaning the parties intended for the different variations. If, on the other hand, variation in the standard boilerplate resulted from tinkering, as the Evolutionary model predicts for clauses subject to rote usage and encrustation, parties instead may in subsequent contracts either return to an original version of the term or generate a new market standard and eliminate the encrustation infecting the core boilerplate term.

In reality, however, the conditions to employ such a test appear only rarely. First, courts are not always clear about the precise interpretation they adopt, leaving residual ambiguity, and often they give multiple reasons for their interpretations. Second, market actors might not acquire sufficient information from a particular court decision, especially if the court(s) in question are obscure and in foreign jurisdictions. As a result, we might not observe clear evidence of a response to court decisions in the data on contracts even if the Intelligent Design model applies and the market disagrees with a court's interpretation.

¹¹ For example, consider the supporting materials provided by the International Swap Dealers Association (ISDA) such as definitions that then help courts interpret the ISDA Master Agreement for OTC derivative transactions. *See* Choi & Gulati (2006) (discussing the role these supplementary ISDA materials can play in assisting boilerplate contract interpretation).

The *NML v. Argentina* case presents the rare exception that allows us to test the relative explanatory power of the Intelligent Design and the Evolutionary models. Consider the following:

- The New York courts made clear the importance of the precise formulation of the contract language (specifically the use of the word “payment”) to their decision. It is worth repeating the language of the Second Circuit Court of Appeals:

[O]ur role is not to craft a resolution that will solve all the problems that might arise in hypothetical future litigation . . . The particular language of the *pari passu* clause dictated a certain result in this case, but going forward, sovereigns and lenders are free to devise certain mechanisms to avoid holdout litigation if that is what they wish to do. They may also draft different *pari passu* clauses that support the goal of avoiding holdout creditors.¹²

- The New York courts made their decision in a fashion that predicts changes in contract language (in reaction to the decision) under both the Evolutionary and the Intelligent design models, albeit in different directions and to different degrees;
- The New York courts that tackled the question were among the most prominent in the business world (primarily, the federal Court of Appeals for the Second Circuit) so there was good reason for widespread change;
- The market actors (sovereign states and their financial and legal advisers) were all highly sophisticated and informed about the case (the Financial Times alone reported the details of the *NML v. Argentina* case in more than a hundred articles, blog posts and podcasts)

¹² *NML Capital, Ltd. v. Argentina*, 727 F.3d 230 (2d Cir. 2013) (emphasis ours).

Given the turmoil in the sovereign debt markets caused by the New York courts' interpretation of the *pari passu* clause in *NML v. Argentina* (and similar, albeit more muted drama that followed a similar decision a decade earlier in Brussels in a case involving Peru), a literature has developed on the Evolutionary versus Intelligent Design question in the precise context of the *pari passu* clause.

On the Intelligent Design side, a number of academics (including one of us) have speculated that the variation in formulations of the *pari passu* clause may be the product of sovereigns having different economic characteristics and different needs to signal credibility to the market (Kahan & Leshem 2016; Tomz & Wright 2013; Wright 2011; Bradley & Gulati 2006). On the Evolutionary side, it has primarily been the legal practitioners, who have suggested that the variation in the formulations of the clause is largely meaningless and that the various versions all basically have a single meaning (Wood 2003; Buchheit & Pam 2004; Financial Markets Law Committee Report 2005; Wood 2010; Olivares-Caminal 2013; Goss 2014; Burn 2014; Petch 2014; Financial Markets Law Committee Report 2015).¹³ In the following sections we describe the competing theories and the predictions they generate regarding the direction of changes in *pari passu* following the SDNY decision.

Intelligent Design

As described earlier, the *pari passu* clause comes in four versions: Rank Equally, Rank Equally in Payment, Pay Equally and one of the three mentioned versions plus Mandatory Law. At issue in the litigation against Argentina was the Rank Equally in Payment version. The plaintiff hedge funds were arguing that Rank Equally in Payment meant the same as Pay Equally, which in turn they argued gave them a right to an injunction from the court barring payments to other creditors unless they were paid ratably on their claims. The defendant, Argentina, countered that the Rank Equally in Payment language was the same as Rank Equally, which in turn they argued was no more than a promise that the country would not pass a law changing the

¹³ There have been some practitioners who have indicated support of the New York court decisions in *NML v. Argentina*, but in terms of saying that lawyers should have expected the courts to apply the Intelligent Design model of interpretation, since that represents traditional form of contract interpretation under New York law (e.g., Keenan 2012).

legal rank of the bond. And even if the clause were violated, they asserted, that did not entitle the creditor to any remedy other than the right to accelerate their bonds.

While the court did not make the precise rationale for its ruling clear, there was a sufficient likelihood that the decision meant that the Rank Equally in Payment variation had the same (or close to the same) legal effect as Pay Equally to motivate both the IMF and the International Capital Markets Association (ICMA) to recommend that market participants revise their clauses (IMF 2014; ICMA 2014). The trial court followed the initial ruling by imposing on Argentina the injunction that the plaintiffs were requesting as a mechanism for enforcement. Argentina ultimately had to pay in full (Cruces & Samples 2016).

In a world of Intelligent Design, the variation in the phrasing of the clauses is conscious and intentional, and the different clauses are promising different rights to creditors (Kahan & Leshem 2016). In particular, the *pari passu* clause mediates between, on the one hand, the ability of investors to hold out against a restructuring which may impede value-increasing resolutions to sovereign distress, and, on the other hand, the moral hazard problem of sovereigns being financially undisciplined if the restructuring option is too readily available. Some sovereigns may rationally prefer a different balance between these competing concerns, leading these sovereigns to choose *pari passu* clauses with varying levels of exposure to holdouts in a restructuring.

The Rank Equally version of the *pari passu* clause at best gives creditors protection only against legal (de jure) subordination, leaving sovereigns with only a low risk of holdouts. In contrast, Pay Equally gives creditors protection against payment (de facto) subordination, imposing a high risk of holdouts on sovereigns. Rank Equally in Payment lies somewhere between Rank Equally and Pay Equally in a probabilistic sense: a court might rule either way resulting in a medium risk of holdouts from an ex ante perspective (Kahan & Leshem 2016). Finally, a sovereign that incorporates the Mandatory Law version of the *pari passu* clause renders the protections of the clause subject to the whims of the sovereign debtor's local legislature. This option to nullify the promise of *pari passu* thus creates only a trivial risk of holdouts.

In the world of Intelligent Design, several possible responses exist to the SDNY decision. First, the market may agree with the SDNY's decision treating Rank Equally in Payment as the same, or similar, with the Pay Equally version of the clause. In this case, we predict that no change will occur to contracts after the SDNY opinion. We can readily dispose of this version of the Intelligent Design model. As we report later in the paper, we observe, after an initial period of no changes, rapidly increasing changes surrounding the *pari passu* clause in our dataset, particularly after October 2014. We therefore do not focus on this first variant of the Intelligent Design model.

Under the second possible response of the market according to the Intelligent Design model, the market may prefer variation in the *pari passu* term, but one that differs from the SDNY's interpretation. In particular, equating Rank Equally in Payment (medium risk) as the same as or similar with Pay Equally (high risk) creates a problem if the intent of those sovereigns using the Rank Equally in Payment clause was to select a holdout risk somewhere *between* Rank Equally and Pay Equally. Ignoring the intent underlying this choice imposes a greater risk of holdouts on sovereigns than the contracting parties believed was optimal at the time they entered into their contract. Under the Intelligent Design model, where sovereigns and other market participants draft new terms to better reflect their intent, we predict that contract drafters should revise the Rank Equally in Payment clauses to reintroduce ambiguity sufficient to reduce the risk of holdouts below that in the Pay Equally version of the clause. Alternatively, the market participants could add language to limit the exposure to holdouts of the Rank Equally in Payment terms, including ancillary language that indicates that holdouts are paid only if the sovereign engages in misbehavior or opportunism. *NML v. Argentina* provides a ready example of what a contract drafter might do: the court there, in *dicta*, described Argentina as a debtor that had behaved especially badly. Thus, a drafter seeking to reintroduce uncertainty and reduce the risk that the Rank Equally in Payment clause will be interpreted the same as Pay Equally or Rank Equally could introduce the following additional language to the clause: “*This clause requires debtors to make ratable payments to all creditors who have pari passu rights vis-à-vis other*

creditors under conditions where the court deems the debtor to have acted unreasonably".¹⁴ We do not expect any changes with any of the other variations in *pari passu* clauses since the court's decision did not reinterpret them.

A small body of literature, specifically focused on boilerplate or standard-form contracts, suggests that contract terms may be "sticky." Because of network externalities, organizational routines and other costs of changing boilerplate terms, rational contracting parties might find themselves using suboptimal (or sticky) terms. (Kahan & Klausner 1997; Choi & Gulati 2004; Smith & King 2009). In contrast, a variant of the Intelligent Design model posits that where sophisticated market participants disagree with a court's interpretation and prefer to return to their original understanding prior to the decision, the parties may implement their preferred contractual terms in contracts immediately after the disfavored opinion. The period of no initial changes we observed in the data we discuss below allows us to dispose of this 'no inertia' variant of the Intelligent Design model in the *pari passu* context. Accordingly, we look for inertia in the Intelligent Design model where parties seek to return to their pre-SDNY bargain.

To summarize, the predictions from the Intelligent Design model are that the market will respond, possibly after some delay, as follows: (1) the clauses stating Rank Equally in Payment will have additional language inserted to make clear that this clause is neither Rank Equally or Pay Equally, but incorporates a holdout risk between these two poles (thus returning to the pre-SDNY bargain) and (2) the other three types of clauses will not change.

Evolutionary Model

The Evolutionary model we test is based on some earlier theoretical literature (Goetz & Scott 1985) and on the reports from interviews conducted with market actors after the two major *pari passu* court cases—Brussels in 2000 and New York in 2011 (Gulati & Scott 2013; Choi, Gulati & Scott 2016b). A common view the market actors conveyed in the interviews—consistent with what academics and practitioners had said in their writings—was that the

¹⁴ This is, of course, but one way in which uncertainty could be introduced; here the uncertainty is introduced by adding into the contract a court determination as to whether the debtor has misbehaved.

variation in the language of the clauses is largely meaningless and that all the clauses are intended roughly to say the same thing. Practitioners in the interviews stressed the importance of inertia costs for the Evolutionary model in particular. Practitioners had four primary explanations as to why they had not quickly corrected their contract language given that they believed that the court decisions in Brussels and New York were problematic:

- First Mover Costs: Clients (and the markets) value standardization. A correction to language without being confident that others in the market were also going to be similarly modifying their contracts would be risky because no one could know how the market would react. In particular, would the market impose a penalty for a move away from the prior formulation (whatever it was) that had been consistent with the standard form?
- Court Correction: Future courts, and particularly higher and more sophisticated courts, would be likely to correct the errors made by the lower courts. Modifying contract language was risky prior to seeing what these other courts were likely to do.
- Debt Overhang: Many issuers have large portions of their debt outstanding with the old, problematic version of the clause. To change the current clauses would be to cast a negative light on the old clauses, perhaps causing the markets to either discount or dump the old bonds and thereby create a differentiation between the current bonds and the older bonds. Traders do not like to have to differentiate among the bonds of the same sovereign and having to do so might cause them to abandon that sovereign's bonds altogether.
- Agency Problems: Neither the issuer's representatives, the lawyers or the bankers involved in routine sovereign issuances are likely to be employed when the sovereign goes into crisis. Their incentives tend to be short term; they want to raise funds and earn fees. If and when things go wrong, a different set of people will be involved.

In aggregate, respondents told us that the Evolutionary model as applied in the *pari passu* context had two components. First, there was only one core *pari passu* clause and market

participants understood the small variations in language as part of the standard form. Second, these variations in the formulation of the clause were not being harmonized because of the absence of focal points: the absence of any simple means of coordination was a category of inertia costs unique to boilerplate terms that lacked meaning. In addition, the lack of meaning corresponds to an evidentiary vacuum for courts seeking to interpret the term. Sovereigns may be more reluctant to draft new contract language in an evidentiary vacuum out of a fear that the new clause may be used as evidence that the pool of existing clauses in fact means something different from the new clause (“evidentiary” inertia). Once these inertia costs were reduced, however, contracts would be modified such that the clauses would converge to a single formulation.

Where inertia derives primarily from the evidentiary vacuum surrounding the meaning of a meaningless term, we predict that inertia costs will have a much stronger negative effect on experimentation with the language of a term because the very act of experimentation may affect the evidentiary (non-existent) pool negatively. Parties instead may choose to wait until the likelihood of a higher court correcting an erroneous lower court opinion is minimal—that is after the final appeals are exhausted. Under the Evolutionary model, we also predict costs associated with being a first mover to the extent such a first mover runs a higher risk (especially if it moves alone) of a court using the move as evidence (in a vacuum of other evidence) that first mover’s existing stock of contracts with the meaningless term means something different from the new usage. The market may also impose a pricing penalty on a first mover (acting unilaterally) to change the market standard. We therefore predict little to no experimentation with the direct language of a meaningless term until the market as a whole collectivizes and gives parties assurances that key market actors will move all together to a new standard (and can therefore make a convincing case through the market wide effort about the meaning of the existing pool of terms). Because market wide collectivizing actions may take time, we predict that inertia will last a significant period of time when evidentiary costs drive the inertia as under the Evolutionary model. We predict instead that subsets of market participants may initially experiment through lower risk and indirect, evidentiary shifts. In addition, we predict under the Evolutionary model that we should see more evidentiary-related experimentation:

- (1) When the costs of an erroneous court interpretation are more salient to a particular issuer, such as issuers that recently *defaulted* (and thus face an acute risk of holdouts);
- (2) When *agency costs are minimized*, which would be when the parties involved are most likely to bear the costs of bad drafting and may also collectivize the costs of experimentation with terms across multiple issuers; that is, parties who would expect to be engaged during any eventual restructuring.
- (3) When the issuer has *minimal debt overhang* and therefore worries about how an erroneous court interpretation will affect this overhang; that is, the sovereign is a newer issuer

We identify sets of circumstances where the various inertia costs that affect the Evolutionary model are minimized and test whether we see movement in the direction of a shift toward a single standard under those circumstances. If first mover costs matter, one might predict that shifts are more likely to occur after there are meetings at which there is explicit agreement among the lawyers to shift to a particular standard clause or when the lawyers in question are high volume issuers who can assure their individual clients that others will also be shifting.

To test this prediction, we focus in particular on a set of meetings that occurred in October 2014 on reforming the *pari passu* clause that included many attorneys working with sovereign issuers as well as the IMF and senior government officials. October 2014 was unusual and important for our purposes because a cluster of meetings among the key players in the market occurred then unlike any other subset of time during our study period. Specifically, there were three sets of meetings during that month: (1) a meeting at Columbia Law School where the topic was why the *pari passu* clauses still had not been reformed, at which representatives of the IMF, the US Treasury, ICMA and most of the leading sovereign lawyers from the New York firms and some of their equivalents from the top English firms were present; (2) the World Bank/IMF annual meeting in Washington DC at which there were multiple educational sessions for government debt managers focused on the need for reforms of the clauses; and (3) a small

meeting of elite New York lawyers (mostly representing Latin American clients) at the New York Fed, to obtain agreement on a common plan to reform the clauses. (For details on these meetings, see Choi, Gulati & Scott 2016b).

Based on the foregoing, we divide the time line into two periods for our initial analysis. The first period runs from June 1, 2011 to September 30, 2014 (termed the “Early Period”). The second period runs from October 1, 2014 to May 30, 2016 (termed the “Late Period”). To test the importance of the collectivizing actions that took place in October 2014, we examine whether the frequency as well as type of *pari passu* changes differ between these two periods.

If inertia follows from an expectation or hope that future court decisions will correct a present court error of interpretation, then one would not expect big changes in contracts until the highest courts have refused to engage in error correction. Most relevant here is the date, June 16, 2014, when the U.S. Supreme Court denied certiorari for an appeal of the Second Circuit decision on the SDNY’s *pari passu* opinion.¹⁵ Later in the paper, we look at whether the frequency and type of *pari passu* changes increased after June 16, 2014 but prior to the collectivizing actions in October 2014 to assess the importance of this type of inertia for the Evolutionary model.

If inertia follows from a particular sovereign issuer’s debt overhang, one might expect changes to be more likely for an issuer that has not accessed the sovereign debt market for a substantial period (and thus does not have substantial amounts of existing debt). We compare the frequency and type of *pari passu* changes for those sovereigns that are relatively new to the sovereign debt market compared with more veteran sovereigns to test the importance of debt overhang.

Lastly, if inertia follows from agency costs and first mover costs then one might expect agency and first mover costs to matter less where the lawyers involved in the deal, the agents, are likely going to be engaged if a future restructuring occurs and when such lawyers are the lawyers across a greater number of sovereign issuances, such as large law firms. Agency costs may also

¹⁵ NML Capital, Ltd. v. Argentina, *cert. denied* 134 S. Ct. 2819 (June 16, 2014).

be minimized where local government officials take a greater interest in the possibility of a near-term restructuring, for example sovereigns that defaulted on their debt in the recent past.

Intelligent Design Model

Inertia costs could affect boilerplate terms generally including those that have well-known meaning. Under the Intelligent Design model, market participants may wish to redraft terms misinterpreted by a court so as to return to their preferred contractual positions but may choose not to do so, at least initially, due to inertia costs. We nonetheless posit that the magnitude of inertia costs for boilerplate terms that have lost meaning through rote usage and encrustation are larger than for ordinary boilerplate terms.

Consider an ordinary boilerplate term with a significant amount of evidence on the meaning of the term. For ordinary boilerplate terms, the parties have an understanding of the meaning of the boilerplate term. Evidence of various sorts will typically exist to support this meaning, including contemporaneous memoranda and definitions provided by industry groups such as ICMA or ISDA. Parties seeking to change such a term will consider the impact of such a change on the pool of evidence on the meaning of the term—however, such an evidentiary change will be only marginal to the extent there already is other evidence on the meaning of the term. The evidentiary uncertainty affecting ordinary boilerplate terms will revolve instead around how courts will use this existing stock of evidence to interpret a term as well as how courts and the market will react to any new language attempting to impose new meaning onto a standard bargain. Parties may also consider how the change will affect the distribution of risk and obligations under the agreement and whether uncertainty in the value of this change may lead some contracting parties to demand a price adjustment (“pricing” related inertia). Parties lastly will consider the uncertainty in how the change may affect the operation of complementary terms (“network” related inertia). Well-known terms may have known interactions with complementary terms while a term with new language will face uncertainty in how this interaction will operate.

For a meaningless term, we conjecture that both pricing and network related inertia costs will be small. To the extent investors in a sovereign bond deal, for example, do not focus on a *pari passu* term and do not price variations (and simply want the term present as part of a “check list” of term), minor variations will not result in pricing differences. Similarly, to the extent a term is meaningless and not utilized by parties, there will be not complementary terms that arise around the meaningless term. Instead, the key inertia for a meaningless term will arise from evidentiary inertia. Moreover, we conjecture that inertia costs affecting meaningless boilerplate terms are qualitatively greater than the inertia costs for ordinary boilerplate terms. For boilerplate terms that have lost their meaning, there is likely little or no evidence for courts to look to when discerning this lost meaning. These terms are acontextual: there is a contractual black hole not only with respect to the meaning but also to any evidence on that meaning.

Rote usage robs terms of any apparent meaning and encrustation with legal jargon makes things worse by suggesting alternate new meanings when in fact no such meanings exist. This results in an increase in the level of uncertainty across all the dimensions of inertia. Parties are reluctant to change because they cannot offer a plausible alternative to the aberrant interpretation. Coordination is more difficult because parties lack focal points—commonly understood meanings around which to coordinate their reform proposals (Choi, Gulati & Scott 2016b). An evidentiary vacuum exists on the meaning of the meaningless term. Parties, as a result, have greater uncertainty about how courts will respond to the changes they do make. The impact on sovereigns with debt overhang is consequently more uncertain to the extent the sovereigns have less ability to predict how courts will respond to changes. Given the underlying absence of meaning, the resulting uncertainty over a judicial interpretation will increase the costs of crafting a solution even for long-term attorneys and sovereigns with heightened interest in addressing the possibility of restructuring. We predict that changes in boilerplate terms affected by rote usage and encrustation in the Evolutionary model will take significantly longer to be revised than boilerplate terms in general under the Intelligent Design model.

We do not formally test whether the time until major changes occur in boilerplate terms is greater if boilerplate terms lack meaning and are encrusted with meaningless variations; the data to do that kind of a test is not available here. That said, we note that a concrete indication of

this differential cost of dislodging suboptimal boilerplate is available from the sovereign debt context itself.

A decade and a half ago, after the *Elliott v. Peru* case in Brussels (the first *pari passu* case), two contractual solutions were on the table: (a) revise the *pari passu* clause directly to disavow the Brussels interpretation; and (b) overhaul the modification clauses. The modification clauses (commonly known as collective action clauses or CACs) were, in contrast to the *pari passu* clauses, well understood, familiar and more frequently used (relative to *pari passu*) (for details, see Gelpern & Gulati 2006). At the time, when the Brussels litigation took place, sovereign bonds governed by New York law (such as the one Peru was using) required unanimous approval by all the creditors to obtain a modification of the key contract terms. That, in turn, created a serious holdout problem; a problem made worse to the extent the holdouts had a powerful weapon such as the injunction that the judge in Brussels gave the plaintiff creditors based on her interpretation of the *pari passu* clause. There were, therefore, two ways to fix the problem created by the decision in Brussels. Either make it difficult to be a holdout by reforming the vote required to modify contract terms to some percentage less than unanimity (say, to 75%) or reform the *pari passu* clauses to remove the weapon that the holdouts would need to implement their strategy.

Both possibilities were considered and discussed. (Gelpern & Gulati 2006). And it was obvious to those involved in the reform process that only fixing the CAC or modification terms was going to be an incomplete solution since a powerful creditor or group of creditors could still obtain a holdout position (now instead of one bond, they would require 25% of the bonds in any single issue). The optimal solution would probably have been to modify both sets of clauses.¹⁶ Yet, coordination among the market actors could only be obtained on reforming the CACs; an

¹⁶ As an aside, there was significant variation in the modification clauses at the time which made the bonds of the various sovereigns differentially vulnerable to the use of a technique known as the Exit Amendment. And indeed, at the time, two of us argued that this probably made sense from an Intelligent Design perspective, since different issuers probably were consciously choosing to structure their modification clauses differently – as a function of the differential concerns that investors might have had about debtor moral hazard (Choi & Gulati 2003). In hindsight, that variation in the clauses that we described (implicitly at least) as the product of Intelligent Design, got cleaned up a year after we published our article, when the market got reformed and all sovereign bonds moved to a single standard vis-à-vis the Exit Consent technique (Gelpern & Gulati 2006), suggesting that the variation was the product of encrustation.

action that took roughly two and a half years (from late 2001 to mid 2003) (Choi & Gulati 2004; Gelpern & Gulati 2006).

As it turned out in the ensuing years, the CAC reforms were not enough to eliminate the holdout problem. Countries like Greece and Ukraine that had CACs had to deal with the threat of holdouts who had obtained blocking positions in some of their 75% bonds (Gelpern, Heller & Setser 2016). And, most importantly, the *pari passu* threat did not disappear. So, after the SDNY decision in 2011, attempts began again to solve the problem. This time, though, the Official Sector attempted not just to improve the CACs, but also to coordinate changes in the *pari passu* clauses.¹⁷ As of mid-2016, widespread change is occurring (see Figure 2).

If one examines the varieties of changes, the CAC changes are far more complex than the revisions to *pari passu*. The former involves modifying the mechanics of creditor voting and consideration of complex issues about eligible voters, the mechanics of voting (e.g., notice, whether the vote occurs in person or by proxy), conflicts of interest and so on (for details, see Weidemaier & Gulati 2014). The *pari passu* revisions, by contrast, should have been simple—just a deletion (or, in the alternative an explanation) of the clause that no one understood. Yet, the former occurred in less than three years and seamlessly the first time (the second version of the changes are even more complex and are ongoing). The latter has taken over 15 years from the first case in Brussels (or over 4 years from the 2011 SDNY decision) and is still ongoing.

The comparison we are making is imperfect: we are comparing two different types of clauses that perform different functions. There surely are other stories one can tell about why CACs were changed relatively quickly in a few years and *pari passu* reform has taken over a decade and half. Yet, the motivation for changing both clauses was the same. And the clause that was *not* changed was the easier to repair (just a few lines to be deleted or modified as compared to multiple pages of complex voting mechanics) *and* would have more directly addressed the problem at hand *and* did not present any real risk of increasing the debtor moral

¹⁷ Alongside, they also attempted to enhance the CACs that previously applied only on single bonds into an Aggregated CAC across multiple bond issues—a highly complex venture involving changing a clause that was originally a few lines long to something many pages in length (Gelpern, Heller & Setser 2016).

hazard problem.¹⁸ We think the answer was that no one really understood the *pari passu* clause: it was a ‘contractual black hole’ in contrast to the clear understanding of the interpretation of the modification clauses by sophisticated market participants.

Instead of the length of time to change, our tests focus on the dynamics of boilerplate contract term change to distinguish between the Intelligent Design and Evolutionary Hypotheses. While evidentiary-related uncertainties will be less important for an ordinary boilerplate term compared with a meaningless term, uncertainties about price adjustments that some contracting parties may demand and the interaction with complementary terms will be stronger for an ordinary boilerplate term. For pricing and network related inertia that affect ordinary boilerplate terms, we predict under the Intelligent Design hypothesis that contracting parties may help overcome this inertia through experimentation directly with the language of the terms—testing the price response of contracting parties in the market as well as the effect of the terms on complementary terms. Moreover, larger market participants such as frequent underwriter’s counsel will help collectivize market action and correspond with this experimentation. Two of us found evidence of just this form of experimentation directly with the language of a term in the shift in the sovereign bond market from unanimity action clauses to collective action clauses in the early 2000s (Choi & Gulati 2004). We predict, therefore, that even if inertia costs affect the Intelligent Design model, those initial market participants that overcome the inertia costs are more likely to make changes directly to the language of the term, including in particular Major shifts, rather than through Evidentiary shifts. In the case of a contractual black hole, however, parties will have greater latitude to fill the evidentiary uncertainty through ex post clarifications and risk factor disclosures, what we term Evidentiary shifts. In contrast, parties may not care about learning how the market will respond to variations in the direct contract language for pricing or network related inertia reasons for a meaningless term and thus engage in less experimentation with the actual language of the term. As we discuss above, we also predict that issuers associated with collectivizing agents able to reduce agency costs, such as large law firms, as well as issuers for whom the risk of default is more salient, and issuers without any prior debt

¹⁸ At least there was no big debate about how fixing the *pari passu* clause would enhance the debtor moral hazard problem, as there was in the case of CACs. For a description of the debates surrounding the 2003-04 contract reforms, see Gelpern & Gulati (2006).

overhang pool of prior bond deals will be more likely to engage in evidentiary experimentation for a meaningless term.

In addition to greater inertia costs, one other important empirical prediction can distinguish the Evolutionary model and the Intelligent Design model. The Intelligent Design model predicts that sovereigns will attempt to return to their pre-SDNY opinion positions. In particular, those clauses not affected by the SDNY opinion, the Mandatory Law and Pay Equally versions of the clause, will not change. In contrast, as discussed above, the Evolutionary model predicts that sovereigns with the Mandatory Law and Pay Equally versions of the clause, because these variations are essentially meaningless, will shift along with other sovereigns to whatever new market standard arises once market participants coordinate to determine the new market standard. The prediction from the Evolutionary model, and one that cuts against the predictions from the Intelligent Design model, is that the degree of variation will fall once contracts begin to be reformed. One possible focal point candidate for a new market standard is the original Rank Equally version of the *pari passu* clause. If this focal point has traction, the Evolutionary model predicts not only that the Rank Equally in Right of Payment clause will be reformed to clarify that it is the same formulation as the Rank Equally clause, but even those sovereigns using the Pay Equally and Mandatory Law versions of the clause will shift to the Rank Equally version as the reasons why tinkering survives—in particular the belief that variations are costless despite the lack of meaning—are affirmatively disproven by the *NML* decision.

IV. Empirical Tests

A. Overall Major Shifts

We first examine Major shifts in the *pari passu* clause. Under the Intelligent Design model, countries prior to the SDNY opinion in 2011 are already at their preferred *pari passu* risk level, and while sovereigns with the Rank Equally in Payment clause may wish to shift, inertia costs may delay this shift. While some sovereigns may find the benefits outweigh the inertia costs of a shift in the Early Period, our prediction is that, under the Intelligent Design model, from October 2014 onward (the “late period”, after coordination) increasingly more sovereigns

with the Rank Equally in Payment clause will find the benefits of changing the clause outweigh the inertia costs, leading to an increase in the incidence of shifts back to language creating a medium risk of holdouts. Under the Intelligent Design model, sovereigns using the Pay Equally (high risk) or Mandatory Law (zero risk) terms will not change as these terms were not affected by the SDNY opinion. Sovereigns using the Rank Equally term may or may not change depending on whether the countries view the SDNY opinion as having a possible spillover effect on the Rank Equally term.

Under the Evolutionary model, in contrast, we predict that all sovereigns from October 2014 onward (the late period), after collectivizing actions reduce inertia costs in the market, will have little or no attachment to their existing terms. To the extent the market favors a particular version of the *pari passu* clause as the new standard, sovereigns with all different types of *pari passu* clauses will begin to move toward this standard. We know from other research that the IMF and other collectivizing agents such as ICMA and the US Treasury Department were trying to achieve coordination in October 2014 around the original Rank Equally version of the clause, the oldest version of the clause, as the market standard (Goss 2014; Sobel 2016; Aggarwal & DeLong 2016; Choi, Gulati & Scott 2016b). The push to return to the original version of the clause implicitly supports the view that later versions were mere encrustation. We predict that under the Evolutionary model, sovereigns with the other three versions of the clause—the Mandatory Law, the Rank Equally in Payment, and the Pay Equally—will shift toward a single version; the Rank Equally clause.

Below, before we turn to our detailed empirical tests, we report the core predictions from the Intelligent Design and Evolutionary models in a simplified fashion. Here, we report *only the Major shifts* in the clause. For simplicity, we display only the predicted end result after any initial delay due to inertia costs under the two models.

The first two (far left) columns are the same in both Tables 2 and 3 because they report the state of the world prior to the SDNY decision in December 2011 (the first column) and the effect of the SDNY decision depending on the sovereign's pre-December 2011 clause (the second column). Then, in the three columns following to the right, we report the predictions

from the models, the results from our tests, and whether the model’s predictions materialized. In terms of which model’s predictions materialized, Evolutionary beats the Intelligent Design model for every category of initial *pari passu* clause.

Table 2: Predictions from the Intelligent Design Model

<i>Pre December 2011 (Initial Types of Clauses and their Risk Levels)</i>	<i>Effect of SDNY Decision (Dec. 2011) On Risk Levels of the Clauses</i>	<i>Predictions From the Intelligent Design Model – Variation is Rational</i>	<i>Results From Data on Changes in clauses 2012-2016</i>	<i>Did The Model’s Prediction Materialize</i>
Pay Equally (High Risk)	Remained the Same (High Risk)	No Change Expected	Some Change— <i>all Changes are to Low Risk</i>	No
Rank Equally in Right of Payment (Medium Risk)	Increased Risk from Medium to High	Change Expected that Would Reduce to Medium Risk (but not as far as Low Risk)	Lots of Change – and <i>all Changes are to Low Risk</i>	No
Rank Equally (Low Risk)	Remained the Same (Level 1)	No Change Expected	Lots of Change – <i>all Changes are to Low Risk</i>	No
Versions 1-3 above, Plus, the Caveat – “Subject to Mandatory Law” (Zero Risk)	Remained the Same (Zero Risk)	No Change Expected	Lots of Changes – <i>all Changes are to Low Risk</i>	No

Table 3: Predictions from the Evolutionary Model

<i>Pre December 2011 (Types of Clauses and their Risk Levels)</i>	<i>Effect of SDNY Decision (Dec. 2011) On Risk Levels of the Clauses</i>	<i>Predictions From the Evolutionary Model – Variation is Meaningless Legal Jargon</i>	<i>Results From Data on Changes in clauses 2012-2016</i>	<i>Did The Model’s Prediction Materialize</i>
Pay Equally (High Risk)	Remained the Same (High Risk)	Change Expected – to Low Risk	<i>all Changes are to Low Risk</i>	Yes (partially)
Rank Equally in Right of Payment (Medium Risk)	Increased Risk from Medium to High	Change Expected – to Low Risk	<i>all Changes are to Low Risk</i>	Yes
Rank Equally (Low Risk)	Remained the Same (Level 1)	Change Expected – to Low Risk	<i>all Changes are to Low Risk</i>	Yes
Versions 1-3 above, Plus, the Caveat – “Subject to Mandatory Law” (Zero Risk)	Remained the Same (Zero Risk)	Change Expected – to Low Risk	<i>all Changes are to Low Risk</i>	Yes

The simplifications in Tables 2 and 3, while demonstrating the bottom line, obscure much of the nuance in what is going on in the data. In what follows, we attempt to capture that nuance. Table 4 reports by year the frequency of sovereign offerings by type of *pari passu* clause and Figure 1 provides a graphical depiction of the frequency of different sovereign offerings by type of *pari passu* clause.

[Insert Table 4 Here]

As reported in Table 4 and depicted in Figure 1, we observe a big decrease in the dispersion of *pari passu* clause types from 2011 to early 2016. Sovereign offerings with the Pay Equally (high risk) version of the *pari passu* clause are infrequent across the 2011 to 2016 period (accounting for only 0.9% of all offerings). Those sovereign offerings with the Mandatory Law term (lowest risk) constitute 36.8% of the sovereign offerings in 2011 and only 26.3% of the

offerings in 2016. Those sovereign offerings with the Rank Equally in Payment clause (medium risk prior to the SDNY opinion and high risk after the opinion) represent 23.5% of the sovereign offerings in 2011 and only 10.0% of the sovereign offerings in 2016. In contrast, sovereign offerings with the Rank Equally (low risk) clause go from 39.7 % of the offerings in 2011 to 62.5% of the offerings in 2016. While sovereign offerings are roughly equally distributed between Mandatory, Rank Equally, and Rank Equally in Payment versions of the clause in 2011, by 2016, the Rank Equally version of the clause is the majority. This shift is statistically significant at the 1% confidence level. This shift in risk down from high (in the case of the Pay Equally and Rank Equally in Payment clauses post-SDNY opinion) to low risk and the shift up in risk from lowest (in the case of the Mandatory Law version of the clause) to low risk (through the adoption of the Rank Equally clause) is not consistent with the Intelligent Design model, and instead supports the Evolutionary model.

B. Early Period Analysis

Under the Intelligent Design model, if countries are already at their optimum point for the *pari passu* clause, they will seek only to move back to their optimum point after a court misinterpretation of the clause. In particular, countries that initially chose the Rank Equally in Payment clause that was understood to be medium risk and misinterpreted as high risk by the SDNY opinion will insert new language into the clause to return to the medium risk level. We expect that these countries will engage in Major Shifts to move back to their desired optimal point, either through the reintroduction of ambiguity in the meaning of Rank Equally in Payment or through clarification that the term applies only in certain situations. As described earlier, drafting the clause to reintroduce ambiguity here would not be difficult—the drafters would only need to condition the triggering of the ratable payments interpretation on some event whose determination was ambiguous (such as whether the debtor had behaved opportunistically).

In contrast, under the Evolutionary model, countries are not at their optimum and instead employ meaningless *pari passu* variations because, at least prior to the Brussels and SDNY opinions, no one cared much about the precise form of the *pari passu* clause but the clause nonetheless was part of a standard package of terms used in sovereign bond offerings. We posit

that October 2014 was an important break point when key market participants and the IMF worked together to coordinate over a new market standard focused around the Rank Equally version of the clause. That said, even prior to October 2014, in the Early Period, there should have been some sovereigns, who even with inertia costs should have found the benefits of at least small changes in their clauses to outweigh the costs associated with inertia.

Specifically, under the Evolutionary model, we predict that instead of higher cost Major shifts, countries will focus more on lower cost Evidentiary shifts. Evidentiary shifts in particular lower those inertia costs associated with the uncertainty that flows from the lack of meaning for terms affected by rote usage and encrustation. Without any prior understanding of an encrusted term, ancillary changes can help fill in the interpretive black hole by asserting a particular meaning. In addition, through these more minor Evidentiary shifts, sovereigns may gauge the reaction by market participants to a specific proposed meaning for a version of the *pari passu* clause. We predict that under the Evolutionary model countries will engage in Evidentiary shifts in the Early Period. In contrast, under the Intelligent Design model, we predict that those sovereigns that overcome inertia costs will engage solely in Major shifts because the addition of new evidence on the meaning of well-known boilerplate terms will not add much to the existing evidentiary record on this meaning.

Table 5 categorizes sovereign issuers in our data sample based on the initial *pari passu* version measured at the time of the issuer's last offering prior to the start of our dataset in 2011. For each initial category of *pari passu* clause, we report whether the sovereign issuer made a Major shift in the risk of the clause either through a change in the language of the *pari passu* clause (Language shift) or a change in the Mandatory Law clause (Mandatory shift). We also report whether the sovereign issuer engaged in an Evidentiary shift, including adding language that informs investors of the risk of a court following the SDNY interpretation (Risk Factor shift) or adding a disclosure that explains the issuer's understanding of the meaning of the clause (Understanding shift).

[Insert Table 5 Here]

From Table 5, we observe that very few Major shifts occur in the Early Period. Only three sovereigns that started prior to the start of our study period with the Rank Equally in Payment clause, the version directly affected by the SDNY decision, engaged in a Major shift of the language of the *pari passu* clause to adopt the Rank Equally version, reducing the risk of holdouts to low risk. This shift is inconsistent with the Intelligent Design model, which would predict action by the sovereign issuers to reproduce a medium risk clause (not a low risk clause). In addition, we see a sovereign with an initial Pay Equally clause (high risk) also engaged in a Major shift to the Rank Equally clause, reducing the *pari passu* risk down to low risk. This shift is also inconsistent with the Intelligent Design model and again supports the Evolutionary model. No issuer in the Early Period changed the Mandatory Law term.

From Table 5, we also observe that while most sovereigns are not changing their *pari passu* clause through Major shifts in the Early Period, sovereigns that initially start with the Mandatory Law, Rank Equally, and Rank Equally in Payment versions of the clause are active in making Evidentiary shifts, consistent with the Evolutionary Hypothesis. For those sovereigns starting initially with the Rank Equally in Payment clause, 23.8% in the Early Period employ a Risk Factor shift; 23.8% also employ an Understanding Shift. As reported in Table 5, a smaller but still positive fraction of the sovereigns initially with the Mandatory Law and Rank Equally clauses also engage in Evidentiary shifts, inconsistent with the Intelligent Design model. This is consistent with inertia affecting the ability of sovereigns to make Major shifts and in particular the evidentiary inertia costs associated with rote usage and encrustation.

As a multivariate test of the factors that correlate with shifts in the *pari passu* clause, we estimated a series of Cox proportional hazard models for the first adoption of any change relating to the *pari passu* clause through Evidentiary shifts, during the Early Period. The Cox proportional hazards model is a type of statistical survival model that relates the time to a specified event to various independent variables that may affect the amount of time to the event (such as whether the sovereign issuer is investment grade). For the dependent variable in the Cox proportional hazards model we look at when a sovereign adopts any Evidentiary shift as the dependent variable in the Early Period. Because of the small number of Major shifts in the Early Period, we do not test that factors associated with Major shifts in the Early Period.

We include as an independent variable in each Cox proportional hazard model the log of the offering amount in U.S. dollars ($\ln(\text{Offer Amount})$), whether the sovereign issuer is investment grade (Investment Grade), whether the issuer's counsel was one of the top 3 issuer's counsel in terms of the number of sovereign offerings in the 2000 to 2010 time period (Top Issuer Counsel), and whether the underwriter's counsel was one of the top 3 underwriter's counsel in terms of number of sovereign offerings in the 2000 to 2010 time period (Top Underwriter Counsel). We also include an indicator variable for whether the sovereign was initially a country with the Rank Equally in Payment clause prior to the start of our study period. Under the Intelligent Design model, countries with the Rank Equally in Payment clause will want to shift after the series of *NML v. Argentina* court opinions to return to their Medium Risk level (since that, under the theory of Intelligent Design, was the optimal point for them). The Evolutionary model predicts that countries with the Rank Equally in Payment clause will shift; the Evolutionary model however also predicts however that countries with other versions of the *pari passu* clause—in particular the Mandatory Law and Pay Equally versions—will also seek to shift to the original Rank version to the extent these variations are meaningless.

Model 1 of Table 6 reports the results. Note from Model 1 that the coefficient on Top Issuer Counsel is positive and significant at the 5% level. The presence of a Top Issuer Counsel correlates with a 531% increase in the probability of an evidentiary shift involving the *pari passu* clause in the Early Period. The importance of Top Issuer Counsel as a facilitator of change is consistent with inertia costs that otherwise deter countries from changing the *pari passu* clause. The importance of a facilitator for change for evidentiary shifts is consistent in particular with the Evolutionary and not Intelligent Design model. Note also that the coefficients on Rank Equally in Payment are not significantly different from zero, inconsistent with change being focused on those sovereigns utilizing the Rank Equally in Payment clause. The more widespread distribution the evidentiary shifts is consistent with the Evolutionary model.

[Insert Table 6 Here]

As a further test of the Intelligent Design model versus the Evolutionary model, we add an indicator variable for whether the sovereign defaulted sometime in the prior 10 years before the start of our study period to Model 1 of Table 6 (“Recent Default”). Countries that recently defaulted may find the risk of holdouts more salient and have a greater incentive to overcome the inertia posited in the Evolutionary model and thus be more likely to engage in an evidentiary shift in the Early Period.¹⁹ Model 2 of Table 6 reports the results.

As reported in Model 2 of Table 6, the presence of a Top Issuer Counsel in a sovereign offering is again strongly correlated with an increased probability of a Risk Factor and Understanding change. The coefficient on Rank Equally in Payment is again not significantly different from zero. This lack of focus for change on the Rank Equally in Payment sovereigns is inconsistent with the Intelligent Design model. The coefficient on Recent Default is also positive and significant at the 5% level. Countries that recently defaulted, like Greece, Ecuador and Ukraine, and for whom the shock of what previously they deemed a meaningless term now having meaning is greater than other countries, are significantly more likely to implement an evidentiary shift related to the *pari passu* clause, consistent with the Evolutionary model. Note that none of these Recent Default sovereigns are countries that initially started with the Rank Equally in Payment clause. They start with either Mandatory Law (lowest risk) or Rank Equally (low risk) versions of the clause. Despite not being directly affected by the U.S. court opinions, these recently defaulting sovereigns take steps in the Early Period to change their *pari passu* clause—consistent with the Evolutionary model and inconsistent with the Intelligent Design model. Recall that sovereigns who have recently restructured have three characteristics that are likely to predict lower inertia costs than others. First, the agents working on their deals face lower agency costs; they are likely to be restructuring specialists, and will be working on the next deal if a new restructuring has to be done. Second, the sovereign itself is likely weak if it had to restructure recently and therefore is at a high risk of a new restructuring. Third, there is likely to be very little debt with the old problematic form of the clause since all of the prior debt was likely restructured.

¹⁹ Empirical evidence tells us that sovereigns that do distressed restructurings or reprofiling have a high likelihood of needing to do them again, in the near future (Mariscal et al. 2015) – and dynamic brought on by the fact that politicians try hard to avoid acknowledging how serious the country’s financial woes are.

We next test the importance of coordinating groups of countries for the modification of the *pari passu* clause. Two such groups relevant for the *pari passu* clause exist--the Eurozone countries and Latin American countries. As a historical matter, the issuers and their lawyers tend to act in a more coordinated fashion for the Euro area and Latin American sovereign issuers. In the Euro, because of the single currency, the debt managers of the various sovereigns have regular meetings and, we know from a different context, that they explicitly discuss matters such as contract reforms (Gelpern & Gulati 2013). As for Latin America, the issuers there have historically used a handful of big New York law firms and they had, like the Euro area sovereigns, effectively coordinated around a prior contract change event some years before. (Gelpern & Gulati 2006). Due to the history of the *pari passu* clause and the experiences of Peru and Argentina, the risk of holdouts may be more salient for the Latin America countries.

We do not include the Eurozone countries in the model because almost no Eurozone country engaged in a shift relating to the *pari passu* clause in the Early Period (and indeed adding an indicator variable for a Eurozone sovereign issuer in the model resulted in a failure in the model to return standard errors due to collinearity).²⁰ Instead, we added to Model 1 an indicator variable for Latin America where the risk of default was acute and many countries had experience with restructuring. Model 3 of Table 6 reports the results.

In Model 3, note that the coefficient on Latin America is positive and significant at the 1% level. Latin American sovereigns are much more likely to make *pari passu* related evidentiary changes in the Early Period, consistent with some degree of coordination among such countries (as well as the importance of holdout risk salience), perhaps facilitated by the large New York law firms, even prior to the coordinating efforts in October 2014. In Model 3 also note that while the coefficient on Top Issuer Counsel is no longer significant, the coefficient on Top Underwriter's Counsel is positive and significant at the 10% level.

²⁰ Interviews with key market actors, including many from debt offices in the Euro area, told us that the fact that they had coordinated to fix their CAC clauses in the wake of the Greek debt crisis of 2010-2012, had delayed their ability to coordinate separately on the *pari passu* clauses. But that plans for a widespread shift toward the low risk clauses were in the works (Choi, Gulati & Scott 2016b).

The presence of Early Period evidentiary shifts and the importance of factors associated with reducing inertia (such as Top Issuer Counsel as a collectivizing agent and Recent Default and Latin America as factors corresponding with holdout risk salience as well as, in the case of Latin America, coordination) are consistent with the Evolutionary Model.

C. Late Period Analysis

The collectivizing actions taken in October 2014 correlate with an increase in Major shifts in the *pari passu* clause from October 2014 onward (in the Late Period) as reported in Table 7. And the big shifts are toward the Rank Equally clause (the low risk version). These shifts include, among others, shifts by sovereigns initially with the Mandatory Law version of the *pari passu* clause. In essence what we believe the data to be showing is that once inertia costs were reduced (via the collectivizing actions taken at the series of conferences in October 2014), sovereigns began to abandon the variations in the *pari passu* clause and move to a single core version of the clause.

These movements toward a single clause, as discussed above, are inconsistent with the Intelligent Design model. They do, however, support the Evolutionary model.

An alternative hypothesis consistent with some degree of intelligent design nonetheless exists that is specific to the context of the SDNY decision involving the *pari passu* clause. Under this alternate story, countries have varying preferences on what level of *pari passu* holdout risk to adopt, but owing to pressure from the IMF they are impelled to move toward the one term favored by the IMF, the Rank Equally term. And the reason the IMF (along with the other Official Sector institutions) prefers this suboptimal shift is because it serves the IMF's private interests. The *NML* decision, after all, had put at risk the IMF's de facto preferred creditor status (Allen & Overy 2012, at p.10); something without which its ability to lend would be seriously constrained. Below, we test this "IMF Pressure" model.²¹

²¹ We borrow this model from Professor Marcel Kahan, who spelt it out at a Duke Law School workshop in response to a question about whether the move toward a single version of the *pari passu* clause would be inconsistent with the Intelligent Design model.

As threshold matter, though, we should say that there is no evidence anywhere in the public record indicating that the IMF has attempted to coerce countries into changing their clauses. Such pressure would be well beyond the mandate of the IMF's legal department and inconsistent with the philosophy underlying the support it received for the shift in contract clauses from its strongest ally in this venture, the U.S. Treasury Department. That philosophy, which has also been the reason why the U.S. Treasury has been a strong opponent of a mandatory Sovereign Bankruptcy Regime for countries, is that countries are best suited to pick the type of clauses that work for them (Sobel 2016, Quarles 2010; Gelpern & Gulati 2006). Nevertheless, to address the argument empirically, we posit that the IMF engaged in strong arm tactics of some sort to get market actors to shift.

To distinguish between the Evolutionary model and the IMF Pressure model we focus on the pattern of shifts in the Late Period. If countries are being pressured into shifting to a term they otherwise would not select, we expect that countries will make the minimum possible changes (that is, they will just do the one Major shift to the IMF's recommended clause—the Rank Equally provision). In contrast, if the collectivizing actions in October 2014 enabled countries to overcome the inertia behind the encrusted *pari passu* clause under the Evolutionary model, we expect that countries will not only make the change suggested by the IMF (moving to the Rank Equally clause) but also make other related Evidentiary Shifts not being pushed directly by the IMF.

Table 7 reports the frequency of Major shifts and Evidentiary shifts for each category of sovereigns by initial type of *pari passu* clause. Table 7 also reports one other change that became prevalent in the Late Period, the addition of language to the *pari passu* clause that limited the scope of the sovereign's exposure to holdout creditors. These limits took one of two forms, limiting the sovereign's exposure only to "external" indebtedness and limiting the sovereign's exposure only to "borrowed" indebtedness (termed "Limit" changes"). While Limit changes are similar to the Major shifts in that they directly change the language of the *pari passu* clause, they differ in a key respect: they effect a relatively smaller change in the degree of holdout risk for sovereigns compared with the Major shifts. These are minor shifts in that they don't impact the interpretation of *pari passu* (the core issue), but only the scope of its

applicability: that is, whether the clause applies only to the sovereign’s “external” indebtedness or to all its borrowing or even more broadly to all its indebtedness (which could include obligations such as salary payments owed to government workers or payments due on government contracts).

[Insert Table 7 Here]

First consider Major shifts reported in Table 7 which include both Language Shifts directly to the *pari passu* clause as well as Mandatory shifts involving the mandatory law clause. While seven of the Major shifts involve sovereigns initially with the Rank Equally in Payment clause, nine involved Major shifts for sovereigns initially with the Mandatory Law clause with the lowest risk of holdouts. In five instances, sovereigns initially with a Mandatory Law clause removed the Mandatory Law clause, increasing their exposure to *pari passu* risk. This increase for the sovereigns that initially had the Mandatory Law clause not affected directly by the SDNY opinion is inconsistent with the Intelligent Design model and instead supports the Evolutionary model.

Second, consider the Evidentiary shifts. From Table 6 observe that sovereigns initially with the Mandatory Law, Rank Equally, and Rank Equally in Payment versions all make Evidentiary shifts in their *pari passu* clause’s meaning, including Risk Factor and Understanding shifts. To the extent these Evidentiary shifts were not on the IMF’s agenda, these shifts are inconsistent with the IMF Pressure model and consistent instead with the Evolutionary model.

To assess the dynamic of shifts in the Late Period, we employ the same hazard model as in Table 6 for the first evidentiary shift in the Late Period. We estimate the model only for those sovereign issuers that did not do an evidentiary shift in the Early Period. We predict that the factors associated with reducing inertia costs associated with evidentiary shifts will have less importance in the Late Period to the extent market wide collectivizing efforts to shift the actual language of the *Pari Passu* clause commenced around October 2014. Table 8 reports the results.

[Insert Table 8 Here]

As reported in Table 8, the coefficients on Recent Default (in Model 2) and Latin America (in Model 3) are not significantly different from zero. Top Issuer Counsel is still positive in Models 1 and 2 of Table 8; however, the significance is now only at the 10% level. Factors that reduce inertia costs are less important for evidentiary shifts in the Late Period, consistent with the importance of market wide collectivizing efforts that commenced in October 2014. We also employ a hazard model for Major shifts in the Late Period. We re-estimate the models of Table 6 using the first instance of a Major shift in the Late Period for a sovereign as the dependent variable. We estimate the model only for those sovereign issuers that did not do a Major shift in the Early Period. We report the results in Table 9.

[Insert Table 9 Here]

Despite the rapid increase in Major shifts in the Late Period as we report in Table 7, we do not find evidence in the hazard models reported in Table 9 that the factors associated with mitigating inertia costs (such as top issuer or underwriter's counsel) are associated with these shifts. This pattern is consistent with the lack of interest in the market to experiment with Major shifts until the market wide efforts at contract language change commenced in October 2014, consistent with the presence of meaningless terms and the Evolutionary model.

An alternate hypothesis exists to explain the dramatic increase in Major shifts in the late period as reported in Table 7 and the lack of importance for factors that reduce inertia costs for Major shifts as reported in Table 9. It is possible that IMF pressure forced countries to move from their desired risk position (the IMF Pressure model we discuss above). Instead of market dynamics, simple government-type pressure from above may explain the pattern of change we observe in the Late Period.

If sovereigns voluntarily engage in a Major shift in the *pari passu* clause, as under the Evolutionary model, we expect that the specific sovereigns that overcame the inertia costs that deter change and modify the underlying *pari passu* language or adopt a Mandatory Law term will also adopt an Evidentiary shift or add a Limit change. Changes under the Evolutionary model, in other words, should come in bunches. Table 10 reports all the sovereigns in the Late

Period that changed the risk level through a Major shift in the *pari passu* clause. The Table also reports whether the specific sovereign also changed other aspects of the *pari passu* clause (including Risk Factor, Understanding and Limit changes).

[Insert Table 10 Here]

Note that of the eleven sovereigns that changed risk levels by revising the language in the *pari passu* clause, nine (or 82%) also made some other *pari passu* related change. The additional changes are consistent with the story that sovereigns that altered the risk levels of their *pari passu* clauses did so because of their own preferences and not due to IMF pressure.

Table 11 reports those sovereigns in the Late Period that changed the level of holdout risk through the removal of a *Mandatory Law* term. The Table also reports whether the sovereign made additional changes that were not being pushed by the IMF, and changes that would support or enhance the shift it was making.

[Insert Table 11 Here]

Of the seven sovereigns that changed the holdout risk through the adoption of a Mandatory term, six (or 86%) *also* made some other *pari passu* related change that supported the shift being advocated by the IMF. The fact that these sovereigns made additional, purely voluntary, modifications to their documentation is consistent with the hypothesis that their Late Period changes were motivated by their own preference and not due to IMF pressure.

As a multivariate test, we estimated a logit model for the presence (=1) or absence (=0) of a non-Major shift change as the dependent variable for a particular sovereign in the Late Period, including Risk Factor, Understanding and Limit changes. For independent variables, we include the log of the offering amount in U.S. dollars ($\ln(\text{Offer Amount})$), whether the sovereign issuer is investment grade (Investment Grade), whether the issuer's counsel was one of the top 3 issuer's counsel in terms of the number of sovereign offerings in the 2000 to 2010 time period (Top Issuer Counsel), and whether the underwriter's counsel was one of the top 3 underwriter's

counsel in terms of number of sovereign offerings in the 2000 to 2010 time period (Top Underwriter Counsel). In Model 1, we include an indicator variable for whether the sovereign engaged in a Major shift involving a language change in the *pari passu* clause (Major Shift Language). In Model 2, we include an indicator variable for whether the sovereign engaged in Major shift involving the addition of a Mandatory Law term (Major shift Mandatory). In Model 3, we include both the Major shift Language and Major shift Mandatory indicator variables. Table 12 reports the results for the models.

[Insert Table 12 Here]

From Table 12, note that the coefficients on Major shift Language and Major shift Mandatory are significant in all the Models. Countries that engage in a Major shift in the *pari passu* clause also tend to make other changes related to the *pari passu* term. This is consistent with the Evolutionary model. In the Late Period, countries faced reduced costs to shift to their preferred term because the Official Sector had done the work of coordinating their actions in October 2014. Countries responded to the reduced costs by not only shifting to the *pari passu* risk level recommended by the IMF and ICMA and other official institutions (the Rank Equally term), but also by adopting other changes that reinforced this low risk version of the *pari passu* clause. If IMF pressure was the key determinant of change, and countries were making the changes reluctantly, we should expect to see countries do the least amount possible to comply with the IMF. We should be seeing only countries that independently preferred the Rank Equally clause to be making these ancillary changes. Our evidence indicates, however, that the shift toward Rank Equally in the Late Period was not due to IMF pressure but instead was due to the reduction in inertia costs resulting from the IMF's efforts to solve the collective action problem in October 2014. Interestingly, none of the coefficients on the other independent variables are significantly different from zero. The most important explanatory factor for whether a sovereign engages in a non-Major shift in the Late Period is whether the sovereign also engages in a Major shift in its *pari passu* clause.²²

²² Another piece of evidence pushing against the IMF-pressure theory is the fact that the Rank Equally version of the clause (that there was the shift towards after October 2014) is not the one that, as a theoretical matter, one should expect the IMF to have preferred. The IMF's preference should have been to delete the *pari passu* clause altogether, if its presence was putting its preferred creditor status at risk. And indeed we see in the articles authored by the key

D. Analysis of Sovereigns Without a Prior History

As a supplementary test of the importance of inertia costs and the Evolutionary model, we focus on those countries without a sovereign bond offering in the period from January 1, 2006 to June 1, 2011 (No History Sovereigns). We posit that the No History Sovereigns face lower inertia costs compared with sovereigns with a history of prior *pari passu* usage. The rationale here, drawn from interviews with practitioners, is that sovereigns who have a large number of bonds outstanding with the problematic versions of the clause might be reluctant to change for fear that a court might draw a negative inference about the meaning of the clauses in the old bonds from the fact that the new bonds changed their clauses (Gulati & Scott 2013). We compare the distribution of types of *pari passu* clauses for both groups of sovereigns in the Early Period when inertia costs were relatively high. We also compare the two groups in the Late Period when inertia costs are lower due to the coordination actions of the IMF and others. If inertia costs of the type suggested by the practitioners are important, we should observe significant differences in the distribution of clauses for the two groups in the Early Period but fewer differences in the Late Period. The results of our comparisons are reported in Table 13 in Panel A (Early Period) and Panel B (Late Period).

[Insert Table 13 Here]

Panel A of Table 13 reports that No History Sovereigns are more likely to draft *pari passu* terms with a lower risk of holdouts as compared to History Sovereigns. In particular No History Sovereigns never employ the high risk Pay Equally version of *pari passu*. Only 13.5% of the No History Sovereigns use the Pay Equally in Payment clause; in comparison, 32.9% of the History Sovereigns use the Pay Equally in Payment clause. The difference in the distribution of *pari passu* clauses for the No History and History sovereigns in the Early Period is significant

players in the reform movement that this idea was raised in the reform discussions and rejected by the majority of market participants (IMF 2014 (paragraph 21); Goss 2014; Sobel 2014; Buchheit & Martos 2014). For them, *pari passu* was on the check list; it could not be deleted even if there was no clear understanding of what function it was serving.

at the 5% level. This is consistent with inertia costs affecting those sovereigns with a prior history of *pari passu* clauses more significantly than those without a prior history.

It is possible, however, that an Intelligent Design advocate could argue that the sovereigns in the No History category differ from the sovereigns in the History category in the type of *pari passu* clause that the sovereigns prefer. To the extent No History sovereigns pose less risk of sovereign opportunism, there is less need to increase the cost of restructuring to deter such opportunism. If this is the case, No History sovereigns may prefer a *pari passu* clause that offers only a low risk of holdouts. The pattern we observe in Panel A of Table 11 for the Early Period, therefore, may reflect Intelligent Design rather than reduced inertia costs affecting the No History Sovereigns. As a threshold matter, this story is somewhat implausible on its face, given that the No History sovereigns are almost all brand new entrants to the markets (countries like Mongolia, Ethiopia and Rwanda). Therefore, creditors should expect more opportunism here (and higher risk *pari passu* clauses), not less opportunism and lower risk clauses (and we see lower risk clauses). Regardless, there is a way to test this question further.

If Intelligent Design explains the pattern in Panel A then we expect that this pattern will persist in the Late Period. However, Panel B of Table 13 reports that the Rank Equally in Payment version of the *pari passu* clause becomes dominant for both No History and History Sovereigns in the Late Period. Moreover, the difference in the distributions for the No History and History sovereigns that was significant in the Early Period is no longer statistically significant in the Late Period. This is consistent with lower inertia costs for all sovereigns in the Late Period and the movement in the context of lower inertia costs to one market standard—the Rank Equally term—consistent with the Evolutionary model.

E. Other Time Breaks

Our analysis focused on the period of time prior to October 1, 2014 (Early Period) and the time from October 1, 2014 onward (Late Period). October 2014, as described earlier, was when the key actors coordinated to agree on a common clause to be adopted by all issuers. There are, however, other important dates and events in the Early Period that were significant to

the SDNY *pari passu* litigation. A critic could question whether it was these other events, rather than the coordination efforts at the meetings in October 2014 that induced the changes that occurred. These dates/events include (a) October 26, 2012, the date when the Second Circuit Court of Appeals upheld the *pari passu* decision from the SDNY, (b) August 26, 2013, when the Second Circuit reaffirmed its decision, and finally, (c) June 15, 2014, when the Supreme Court declined to hear the matter.²³

It is possible that the sequence of these court events correspond with an increasing sense in the market that the SDNY view of the Rank Equally in Payment clause would not be overturned. To the extent the hope of a future court correction contributed to inertia costs in the Evolutionary model, one might expect an increase in modifications to *pari passu* after these dates, particularly including Major shifts. To assess the importance of these earlier dates as compared to October 2014, we tabulated the number of Major shifts by quarter for the sovereign issuers starting with the second quarter of 2011 (from the start of our dataset on June 1, 2011) to the second quarter of 2016 (to the end of our dataset on May 30, 2016). Figure 2 depicts the number of sovereign issuances that employ a *pari passu* term that reflects a Major shift by quarter as well as the key dates involving the *pari passu* litigation in the United States.

Note from Figure 2 that the key break point is in October 2014. Sovereign issuances in the fourth quarter of 2014 (containing October 2014) more than doubled the incidence of *pari passu* clauses reflecting a Major Shift compared with the third quarter of 2014. While there are some issuances prior to October 2014 containing Major shifts, October 2014 represents a significant increase in issuances with Major shifts compared with the earlier, potentially noteworthy, court-related dates. This justifies the primary comparison in our analysis between the Early and Late Periods. It also suggests that the court decisions by themselves were not sufficient to induce market-wide changes in *pari passu*. As best that we can tell, the coordination that occurred in the multiple meetings held in October 2014 was key to the widespread market reaction that subsequently occurred.

²³ In between, these dates of key court decisions, is also the release of ICMA's proposed revisions to the *pari passu* clauses in December 2013. These proposed revisions then are more officially released in August 2013. See Goss (2014).

V. Conclusion

Traditional contract doctrine treats commercial contract terms—even those terms that are standard form boilerplate—as embodying a bargain among sophisticated contracting parties. In particular, these parties are assumed to use precise language in their contracts because they want courts and counterparts to understand fully the combinations of underlying substantive rights that form the basis for mutually beneficial trade. The implication of this model of contracting behavior is that, other things equal, courts are supposed to give meaning to the language of contracts that reflects the parties *ex ante* intentions. The dominant common law view presumes that contract language that has a clear, standard meaning was so understood (and intended) by the parties. But even if the language is imprecise or ambiguous, courts nevertheless assume that a meaning can be found in the surrounding context of the agreement. Thus, whether from the text of the agreement or from the context, the universal assumption is that there is a meaning—a shared intent—to be discovered. This assumption holds because, absent bargaining irregularities, the parties know their substantive objectives and thus are best able to select the most apt contract language to achieve those objectives. And if that is the case, social welfare is maximized by courts trying to discern what parties intended when they wrote their contract and the best evidence of that intent are the words they chose to embody that intent.

Reality, in the world of boilerplate contracts, is quite different from the conventional assumptions of contract law, however. Even the most sophisticated contracting parties do not tailor standardized contracts to articulate precisely their particular needs, expectations and understandings. Instead, agents with imperfect knowledge of the purposes that support (or originally supported) the boilerplate terms, copy the standard forms, making minor modifications at the margins to meet their clients' objectives as they understand them (tinkering, as opposed to tailoring). The end result is that contract clauses that no one understands can become part of the standard template, and variations among these clauses that are largely meaningless can arise and even grow in usage.

Using a study of one of the most sophisticated financial markets in the world—the market for sovereign bonds—we examine the foregoing premise. Specifically, in the infamous case of

NML v. Argentina, the New York courts followed the standard doctrinal paradigm and attached definitive importance to the specific choice of words of the boilerplate contracts at issue. Using data on how the market responded to this decision, we ask whether the market response to this case indicates that parties intended for the small variations in their contract language to embody subtle differences in meaning consistent with a model of Intelligent Design. Contrary to the standard paradigm for contract interpretation, and contrary to conventional academic wisdom (including some of our own prior work), we find the data to point overwhelmingly toward an Evolutionary model in which essentially meaningless variations accrete through encrustation and are cemented in the standard form through rote repetition.

What then are the implications of our findings? Is our one example of the *pari passu* clause isolated and idiosyncratic? Or is the phenomenon of contractual black holes such as *pari passu* more widespread. Elsewhere, we have argued that there is reason to expect that the phenomenon of standard terms that lack contemporary meaning extends beyond this single case, at least in the case of markets that favor standard-form contracts (Choi, Gulati & Scott 2016b). If so, the next question is whether the standard paradigm of contract interpretation that assumes rational agents tailoring contracts to precisely suit their objectives needs to be modified so that cases like *NML v. Argentina* and the staggering social costs that follow in their wake, do not occur again.

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Table 4: Incidence of *Pari Passu* Clauses by Sovereigns

	Mandatory Law	Rank Equally	Rank Equally in Payment	Pay Equally	All
2011	25 47.17%	12 22.64%	16 30.19%	0 0.00%	53 100%
2012	63 47.37%	34 25.56%	33 24.81%	3 2.26%	133 100%
2013	62 47.33%	23 17.56%	45 34.35%	1 0.76%	131 100%
2014	54 41.22%	34 25.95%	41 31.3%	2 1.53%	131 100%
2015	39 31.97%	55 45.08%	28 22.95%	0 0.00%	122 100%
2016	23 27.38%	52 61.9%	8 9.52%	1 1.19%	84 100%
Total	256 40.67%	210 32.11%	171 26.15%	7 1.07%	654 100%

Table 5: Early Period Shifts by Sovereign Issuers

	Mandatory Law	Rank Equally	Rank Equally in Payment	Pay Equally
Language Shift	0 0.0%	0 0.0%	3 14.3%	1 50.0%
Mandatory Shift	0 0.0%	0 0.0%	0 0.0%	0 0.0%
Risk Factor Shift	1 5.6%	1 5.9%	5 23.8%	0 0.0%
Understanding Shift	2 11.1%	3 17.7%	4 19.1%	0 0.0%
Total	2 11.1%	3 17.7%	8 38.1%	1 50.0%

Percentages are computed as a percentage of the total number of sovereign bond issuances in each particular category (Mandatory Law, Rank Equally, Rank Equally in Payment, and Pay Equally categories).

Table 6: Early Period Hazard Model for Evidentiary Shifts

	(1) Evidentiary Shift	(2) Evidentiary Shift	(3) Evidentiary Shift
Ln(Offer Amount)	1.030 (0.20)	1.140 (0.80)	0.913 (-0.57)
Investment Grade	0.262 ⁺ (-1.65)	0.334 (-1.30)	0.205 (-1.58)
Top Issuer Counsel	6.311* (2.16)	6.320* (2.09)	1.715 (0.44)
Top UW Counsel	0.706 (-0.55)	0.641 (-0.69)	5.086 ⁺ (1.66)
Rank Equally in Payment	1.606 (0.75)	3.069 (1.45)	1.738 (0.81)
Recent Default		11.54* (2.08)	
Latin America			35.50** (3.14)
<i>N</i>	248	248	248
pseudo <i>R</i> ²	0.186	0.240	0.377
ll	-30.28	-28.28	-23.18

Exponentiated coefficients; z statistics in parentheses; ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.

Table 7: Late Period *Pari Passu* Clause Changes

	Mandatory Law	Rank Equally	Rank Equally in Payment	Pay Equally
Language Shift	4 28.6%	0 0.0%	7 36.8%	0 0.0%
Mandatory Shift	5 35.7%	2 16.7%	0 0.0%	0 0.0%
Risk Factor Shift	2 14.3%	3 25.0%	3 15.8%	0 0.0%
Understanding Shift	7 50.0%	7 58.3%	9 47.4%	0 0.0%
Limit Change	4 28.6%	1 8.3%	0 0.0%	0 0.0%
Total	8 57.1%	8 66.7%	7 36.8%	0 0.0%

Percentages are computed as a percentage of the total number of sovereign bond issuances in each particular category (Mandatory Law, Rank Equally, Rank Equally in Payment, and Pay Equally categories).

Table 8: Late Period Hazard Model for Evidentiary Shifts

	(1) Evidentiary Shift	(2) Evidentiary Shift	(3) Evidentiary Shift
Ln(Offer Amount)	0.777 ⁺ (-1.82)	0.773 ⁺ (-1.85)	0.784 ⁺ (-1.76)
Investment Grade	0.446 (-1.42)	0.381 (-1.57)	0.585 (-0.89)
Top Issuer Counsel	3.816 ⁺ (1.78)	4.252 ⁺ (1.90)	3.031 (1.39)
Top UW Counsel	0.660 (-0.71)	0.544 (-0.95)	1.050 (0.07)
Rank Equally in Payment	2.572 (1.49)	2.484 (1.44)	2.793 (1.54)
Recent Default		0.446 (-0.65)	
Latin America			3.565 (1.30)
<i>N</i>	57	57	57
pseudo <i>R</i> ²	0.125	0.131	0.144
ll	-39.13	-38.90	-38.29

Exponentiated coefficients; z statistics in parentheses; ⁺ $p < 0.10$, * $p < 0.05$, ** $p < 0.01$.

Table 9: Late Period Hazard Model for Major Shifts

	(1) Major Shift	(2) Major Shift	(3) Major Shift
Ln(Offer Amount)	0.896 (-0.71)	0.895 (-0.71)	0.875 (-0.85)
Investment Grade	0.665 (-0.63)	0.608 (-0.76)	0.717 (-0.51)
Top Issuer Counsel	1.662 (0.66)	1.871 (0.80)	1.384 (0.41)
Top UW Counsel	1.221 (0.30)	1.070 (0.10)	1.775 (0.76)
Rank Equally in Payment	2.035 (1.00)	1.797 (0.81)	1.811 (0.80)
Recent Default		6.29e-17 (-0.00)	
Latin America			2.858 (1.17)
<i>N</i>	85	85	85
pseudo <i>R</i> ²	0.063	0.075	0.083
ll	-32.84	-32.44	-32.16

Exponentiated coefficients; z statistics in parentheses; ⁺ $p < 0.10$, ^{*} $p < 0.05$, ^{**} $p < 0.01$.

Table 10: Late Period Other Changes For Sovereigns with a Major Shift Language

	Risk Factor Change	Understanding Change	Limit Change	Any of the Three Changes
Abu Dhabi	0	1	0	1
Chile	0	1	0	1
Colombia	0	0	0	0
Croatia	0	1	0	1
Dominican Republic	0	1	0	1
Gabon	0	1	0	1
Hungary	0	0	0	0
Israel	0	1	0	1
Mexico	0	1	0	1
Montenegro	1	1	0	1
Ukraine	0	1	1	1

Table 11: Late Period Others Changes For Sovereigns with a Major Shift Mandatory

	Risk Factor Change	Understanding Change	Limit Change	Any of the Three Changes
Abu Dhabi	0	1	0	1
Albania	0	1	1	1
Egypt	1	1	0	1
Jordan	1	1	0	1
Lithuania	0	1	1	1
Russia	0	0	0	0
Ukraine	0	1	1	1

Table 12: Logit Model of the Presence of a Non-Major Shift for a Sovereign in the Late Period

	(1)	(2)	(3)
Ln(Offer Amount)	-0.0297 (-0.38)	-0.0140 (-0.18)	-0.0249 (-0.31)
Investment Grade	-0.404 (-0.64)	-0.0971 (-0.16)	-0.0486 (-0.07)
Top Issuer Counsel	0.628 (0.99)	0.948 (1.54)	0.702 (1.07)
Top UW Counsel	-1.025 (-1.51)	-0.521 (-0.81)	-0.820 (-1.15)
Major Shift Language	2.032* (2.30)		2.085* (2.27)
Major Shift Mandatory		2.148+ (1.81)	2.182+ (1.79)
Constant	0.591 (0.31)	-0.204 (-0.11)	-0.0886 (-0.05)
<i>N</i>	53	53	53
Pseudo R^2	0.138	0.109	0.195
Log Likelihood	-31.60	-32.65	-29.52

z statistics in parentheses; + $p < 0.10$, * $p < 0.05$, ** $p < 0.01$. Non-Major Shift is the dependent variable and defined equal to 1 if the sovereign implemented a risk factor change, understanding change, or limit change in any of its offerings in the Late Period and 0 otherwise.

Table 13

Panel A: Early Period

	No History Sovereigns	History Sovereigns
Mandatory Law	28 53.90%	171 45.70%
Rank Equally	17 32.70%	74 19.80%
Rank Equally in Payment	7 13.50%	123 32.90%
Pay Equally	0 0.00%	6 1.60%
Total	52 100.00%	374 100.00%

Pearson chi2(3) = 10.6847 Prob. = 0.014

Panel B: Late Period

	No History Sovereigns	History Sovereigns
Mandatory Law	12 30.00%	55 29.30%
Rank Equally	19 47.50%	100 53.20%
Rank Equally in Payment	9 22.50%	32 17.00%
Pay Equally	0 0.00%	1 0.50%
Total	40 100.00%	188 100.00%

Pearson chi2(3) = 0.9742 Prob. = 0.807

Figure 1: Percentage of Pure Sovereign Issuances Under Foreign Law by Year with Specific Type of Pari Passu Clause



