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Between Mandate and Market: Contract Transition in the Shadow of the International Order

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BETWEEN MANDATE AND MARKET: CONTRACT TRANSITION IN THE SHADOW OF THE INTERNATIONAL ORDER

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ABSTRACT

Not unlike the average American, nations from the United States to Burkina Faso have long relied on credit to survive. Taking various forms over the years, such debt has most recently been financed through sovereign bonds. Like their corporate cousins, sovereign bonds amount essentially to a contract obligating the debtor to make recurring payments of principal and interest until a maturity date, on which any remaining balance of principal comes due. Unlike corporate bond contracts, the terms of sovereign debt contracts are set out with a firm expectation of future debt restructuring, when the sovereign issuer—perhaps inevitably—faces financial distress.

In the face of this premonition, contract boilerplate in sovereign debt instruments issued in the United States long dictated the unanimous consent of bondholders to any debt restructuring. This requirement persisted for decades, notwithstanding widespread consensus that such unanimous action provisions increased transaction costs, produced inefficient delays in debt restructuring, enhanced the moral hazards of the sovereign debt market, and otherwise triggered collective action failures. Yet, the sovereign debt markets have recently made an about-face, replacing the unanimity requirement for debt restructuring with less demanding provisions for collective, or majority, action by creditors. Completed over the course of just a few months in 2003, this unexpected and dramatic shift offer a

natural experiment of sorts: Why might contract boilerplate not respond to apparent efficiency demands for extended periods? What might cause it to respond eventually? In particular, what role might state action have in the evolution of boilerplate contract terms and in contract transition generally?

In the realm of international finance, these inquiries demand urgent analysis, both because the relevant sovereign debt contract standards continue to evolve, and because the appropriate role of national authorities and the official sector (e.g., the International Monetary Fund) in shaping the sovereign debt restructuring regime remains an open question: Most broadly, can the market be expected to facilitate efficient transition in contracts with significant boilerplate elements, or is regulatory mandate essential to such change? Challenging this dichotomous choice between market or mandate, this Article proffers a "third way" toward efficient contract transition. While the market may not always produce efficient transition, ordinary public regulation may not be the answer. Instead, this Article identifies state action grounded in noncoercive "regulatory cues" as the mechanism of efficient transition in standardized contract terms. In the face of growing reliance on boilerplate contract terms and standard-form contracts, public intervention in the form of regulatory cues may, paradoxically, help to facilitate meaningful choice in contract design, and hence a true freedom of contract. The role of regulatory cues in sovereign debt contracts, moreover, may also pressage a potential role in international regulation generally given the limits of hard power within a community of sovereign states.

INTRODUCTION

This is more about sending a signal to the international markets than it is about reducing our borrowing costs.

—Mexican Finance Ministry official, introducing collective action term in new sovereign debt contracts[1]

In the corner of every room in which the terms of sovereign debt contracts are negotiated and considered sits the 800-pound gorilla of potential debt restructuring. The sovereign bond contract—by which nation-states receive an influx of investment for national growth and development, in exchange for a

[1] *Mexico Pioneers Plan to Ease Debt*, FIN. TIMES INVESTOR, Feb. 24, 2003.

stream of principal and interest payments—is one designed with a strong premonition of breach. Yet the international financial order lacks any effective cage for its gorilla. Nation-states go bankrupt, but this does not force them and their creditors into bankruptcy court—an institution alien to the international financial architecture. It leads them back to the negotiating table.

Contract terms have consequently been relied on to define the ways and means of sovereign debt restructuring and default. Sovereign bond contracts issued under New York law—the most typical choice of law, especially among emerging market debtors, those most susceptible to default—have long incorporated boilerplate language permitting restructuring of the bond, but only with the bondholders' unanimous consent. Yet this stricture has proven to be a high barrier to debt restructuring. Most importantly, a unanimity requirement opens the door to abuse by holdout creditors, who can, and often do, insist on inflated side payments to accede to a restructuring plan already agreed to by most other creditors.[2] Notwithstanding such holdout problems and other collective action difficulties, however, little has changed in the conventions of debt contracting for decades. Even the increased pressure for change triggered by a series of emerging market financial crises in the late 1990s seemed to provoke little response from the market.

Against this backdrop of longstanding stasis, few observers of the sovereign debt markets in early 2003 would have predicted any shift away from unanimous action provisions in the near future. Yet over the course of only a few months in the middle of 2003, this conventional wisdom was disproved. By the end of the year, the longstanding norm of unanimous action for debt restructuring had been all but abandoned. In a complete inversion of the status quo, once-familiar unanimous action provisions have become the exception in sovereign debt contracts, while collective action clauses permitting restructuring by a qualified majority of bondholders are the expected norm.[3]

One might reasonably expect contract norms—along with other social norms—to be products of evolutionary patterns of adjustment and reform. Decentralized in their origins, and diffuse in their operation, the drafting conventions behind contract boilerplate and standardized contracts seem

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[2] Corporate and other domestic debtors effectively avoid holdout problems through the bankruptcy regime and its automatic stay, cramdown, and other mechanisms, by which holdout creditors can be pressed into agreement.

[3] *See infra* Part I.B.2.

unlikely candidates for rapid and revolutionary change. Many have consequently puzzled over the recent shift in sovereign debt contract conventions. As Mitu Gulati and David Skeel have queried: "What does this sudden move from a point of unwillingness to try even minimal change to one of everyday experimentation tell us about the dynamics of the underlying system? . . . [W]hat produces movement out of the status quo[?]"[4] Alongside these questions one might add another: Why was the move so sudden?

Here, I attempt to respond to these inquiries with an eye to the evolution of standardized contract terms generally. Can such terms be expected to evolve naturally with changing conditions, or might their transition require regulatory mandate? Most observers fall in one of two camps: In one camp sit those who assert that efficient contract norms emerge naturally by way of the market, while in the opposing camp are those who insist such norms must be dictated by command regulation. This Article suggests an unconventional possibility, between these conventional bounds. Standardized contract terms may not evolve efficiently, and yet traditional regulation, with its characteristic coercion, may not be the appropriate remedy. Drawing on the microeconomics of network externalities, as well as a relatively unexplored corner of game theory, I offer an explanation of the seemingly incongruous patterns of longstanding stasis and abrupt change in sovereign debt contract terms, and propose a narrowly confined, yet essential and perhaps ongoing, regulatory role in the evolution of contract boilerplate.[5]

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[4] *See* G. Mitu Gulati & David A. Skeel, Jr., International Financial Architecture: Has the Financial World Arrived at a Collective Action Clause Consensus? 6 (June 20, 2003) (unpublished manuscript, on file with author).

[5] Distinct applications of the network theory and coordination game analysis of transition that I explore in sovereign debt contracting herein can be found in Robert B. Ahdieh, *Making Markets: Network Effects and the Role of Law in the Creation of Strong Securities Markets*, 76 S. CAL. L. REV. 277 (2003) [hereinafter Ahdieh, *Making Markets*] (outlining network analysis of securities market transition) and Robert B. Ahdieh, *Law's Signal: A Cueing Theory of Law in Market Transition*, 77 S. CAL. L. REV. 101 (2004) [hereinafter Ahdieh, *Law's Signal*] (developing regulatory cueing theory of law's role in coordinating transition in network industries).

In this issue of the *Emory Law Journal*, Steve Choi and Mitu Gulati offer the results of an empirical analysis of the presence of network effects in sovereign debt contracting. *See* Stephen Choi & G. Mitu Gulati, *Innovation in Boilerplate Contracts: An Empirical Examination of Sovereign Bonds*, 53 EMORY L.J. 929 (2004). Supplementing their analysis, this Article considers the possible sources of network effects in sovereign debt contracting, and their implications. Further, it attempts to theorize what might trigger transition in network environments, including sovereign debt contracting. Yet, it does not assert any firm conclusion on the strength of network effects in sovereign debt contracts. Rather, it outlines why network effects might be predicted in sovereign debt contracts, and suggests the consistency of recent developments in sovereign debt contracting with the presence of such effects.

The dramatic proposal of the International Monetary Fund to create a bankruptcy court-like Sovereign Debt Restructuring Mechanism (SDRM) and even more limited suggestions that the IMF or United States mandate the standardization of sovereign debt contracts[6] are therefore challenged by the present analysis. The Article also questions, however, the contractual approach that is posited as the alternative. Rather than a dichotomous choice between creation of the IMF's SDRM, or debtors' voluntary, spontaneous adoption of standardized (and presumably efficient) collective action clauses, as the appropriate means to move away from unanimous action provisions and other inefficient contract terms,[7] I develop and explore a gray area in the middle. Specifically, I describe a noncoercive "cueing" function for law in facilitating contractual change, and suggest that the recent shift in sovereign debt contract terms was driven by just cues. This analysis offers lessons not only for efficient transition in sovereign debt contract boilerplate, but also for the role of the state in contract change generally, including in corporate and real estate contracts, among others.

Part I describes the historical choice between unanimous action and collective action clauses in sovereign debt contracts, the IMF's proposal to create an SDRM to deal with the inefficiencies of unanimous action clauses, and the recent shift of the market to collective action contract provisions. Part II develops a conception of sovereign debt contracting as characterized by network effects—phenomena by which the individual benefits of a particular good or service, as in the paradigmatic networks of telephone communication and computer operating systems, grow as the same or compatible goods or services are purchased by other consumers. Further, Part II suggests how network effects in sovereign debt contracting can explain not only the longstanding resistance of the sovereign debt markets to collective action clauses, but also their abrupt and wholesale adoption of just such clauses over the course of a few months in 2003.

Part III picks up where the network story leaves off, drawing on a relatively unfamiliar corner of game theory to explain what might have triggered the recent shift of the sovereign debt markets from stasis to change.

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[6] Proposals favoring IMF or U.S. dictation of standardized debt contract terms have arisen largely in the aftermath of the shift from unanimous action requirements to majoritarian collective action clauses. *See infra* notes 277-79 and accompanying text.

[7] *See* William W. Bratton & G. Mitu Gulati, *Sovereign Debt Reform and the Best Interest of Creditors*, 57 VAND. L. REV. (forthcoming 2004) (describing alternative arrangements for efficient sovereign debt restructuring).

Characterizing sovereign debt contracting as a "coordination game" of sorts, I identify a role for regulatory cues in transition among the Nash equilibria embedded in such games. After suggesting some of the possible cues in the sovereign debt markets' transition to collective action provisions, I use these examples to explore the nature of regulatory cues as a distinct mode of state action. Finally, in Part IV, I consider the ongoing role of regulatory cues in sovereign debt contract transition, including the inevitable limits of that role. I conclude by noting the broader implications of cueing forms of regulation for standardized contracts generally, and perhaps for the growing effort to introduce transnational regulatory norms and standards from international finance to antitrust and securities law.

I. THE SLOW AND SUDDEN EVOLUTION OF SOVEREIGN DEBT CONTRACTS

Recent challenges to the international regime of sovereign debt restructuring and dramatic changes in the conventions of sovereign debt contracting have occurred against the backdrop of longstanding competition among alternative standards for the restructuring of such debt. The market in sovereign debt has thus long been characterized by two distinct norms for the alteration of basic financial terms of sovereign debt contracts.

The majority of sovereign debt contracts, particularly those of emerging markets, are issued under New York law. With few exceptions, these contracts have long included unanimous action clauses (UACs) requiring unanimity for any changes to their basic terms. As a consequence, they erected a significant barrier to efficient debt restructuring.[8] Most basically, such inefficiency rests on the substantial collective action obstacles that UACs place on the return of sovereign debtors to financial health and stability, and to the financial markets themselves.[9] Under UACs, holdout creditors may resist participation in any agreed restructuring, absent substantial side payments outside any collective agreement.[10] This has the potential to delay restructuring, if not to deter the participation necessary for it to occur at all.[11] In slightly different terms, such

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[8] *See* G. Mitu Gulati & Kenneth N. Klee, *Sovereign Piracy*, 56 BUS. LAW. 635, 642-43 (2001); Steven L. Schwarcz, *Sovereign Debt Restructuring: A Bankruptcy Reorganization Approach*, 85 CORNELL L. REV. 956, 960-61 (2000).

[9] *See* Marcel Kahan, *Rethinking Corporate Bonds: The Trade-Off Between Individual and Collective Rights*, 77 N.Y.U. L. REV. 1040, 1054 (2002); Schwarcz, *supra* note 8, at 960-61, 980.

[10] *See* Kahan, *supra* note 9, at 1055-56; Schwarcz, *supra* note 8, at 961.

[11] *See* Schwarcz, *supra* note 8, at 961.

holdouts inevitably increase transaction costs and reduce predictability in sovereign debt restructuring.[12]

Given the latter possibilities, unanimous action requirements may also increase the moral hazards of sovereign debt. By delaying, if not preventing, efficient sovereign debt restructuring, UACs increase the prospect of official sector bailouts. These, in turn, produce the moral hazard of looser restraints on both lending and borrowing practices, and attendant efficiency losses.[13]

To avoid this parade of horribles, collective action clauses (CACs)—the norm in sovereign debt contracts issued under English law—permit restructuring by a qualified majority of bondholders. Collective action provisions have been widely favored by academics and policymakers alike. Yet their enthusiasm was to little avail. Until early 2003, the market in sovereign debt continued to be characterized by a dominant preference for UACs. By the end of the year, however, the tide had turned. UACs had become largely a historical artifact. Notwithstanding the long resistance to change, collective action is now the norm in nearly every newly negotiated sovereign debt contract.

A. Unanimous and Collective Action in Sovereign Debt Restructuring

Since the late nineteenth century, majority voting provisions have been the norm in sovereign bonds issued under English law, which include a significant minority of all sovereign bonds.[14] So-called majority action clauses (MACs) have allowed a supermajority of bondholders to alter the basic financial terms of the relevant bond issue, including restructuring payments, adjusting interest rates, and reducing principal.[15] By contrast, sovereign bonds issued under

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[12] *See* Celeste Boeri, *How to Solve Argentina's Debt Crisis: Will the IMF's Plan Work?*, 4 CHI. J. INT'L L. 245, 248 (2003); Lee C. Buchheit & G. Mitu Gulati, *Sovereign Bonds and the Collective Will*, 51 EMORY L.J. 1317, 1351 (2002).

[13] *See* Schwarcz, *supra* note 8, at 961-62, 1004 n.279.

[14] Unanimous action provisions have also been the norm in debt issued by Russia. *See* Nouriel Roubini & Brad Setser, Improving the Sovereign Debt Restructuring Process: Problems in Restructuring, Proposed Solutions, and a Roadmap for Reform 13 (Mar. 9, 2003) (unpublished manuscript, on file with author); *see also* BARRY EICHENGREEN ET AL., CRISIS RESOLUTION: NEXT STEPS 35 nn.47-48 (IMF Working Paper No. 03/196) (forthcoming in BROOKINGS TRADE F.).

[15] Under the broader rubric of "collective action clauses," other opportunities for collective action by creditors, besides majority restructuring, have also been included or proposed in sovereign bond issues. "Collective representation clauses," for example, establish a creditor committee or other representative arrangement for bondholders. "Majority enforcement clauses" (or "initiation clauses") mandate that twenty-five percent of bondholders approve any acceleration of debt, but allow fifty percent of bondholders to rescind any such acceleration. Such acceleration provisions, notably, were included in New York law bonds as well.

New York law, which constitute the majority of sovereign debt issuances,[16] particularly by emerging markets,[17] have traditionally not permitted majority

See Buchheit & Gulati, *supra* note 12, at 1335. "Engagement clauses" dictated early and regular interaction of the sovereign debtor with its bondholders, and outlined the overall process of restructuring. *See* Press Release, Under Secretary of Treasury John B. Taylor, Using Clauses to Reform the Process for Sovereign Debt Workouts: Progress and Next Steps (Dec. 5, 2002) [hereinafter Taylor, Using Clauses], *available at* http://www.ustreas.gov/press/releases/po3672.htm; Press Release, Under Secretary of Treasury John B. Taylor, Sovereign Debt Restructuring: A U.S. Perspective (Apr. 2, 2002) [hereinafter Taylor, Sovereign Debt Restructuring], *available at* http://www.ustreas.gov/press/releases/po2056.htm. Some engagement clauses, furthermore, also provide for the appointment of a trustee. *See* Barry Eichengreen & Ashoka Mody, Is Aggregation a Problem for Sovereign Debt Restructuring 2 (Jan. 2003) (unpublished manuscript, on file with author). Finally, a standard provision in nearly every bond contract provides for a majority (or supermajority) of bondholders to amend the nonfinancial terms of the bond.

Various authors have characterized these collective action provisions in a variety of ways. On the provisions for collective action in English MACs, see Andrew Yianni, *Resolution of Sovereign Financial Crises—Evolution of the Private Sector Restructuring Process*, FIN. STABILITY REV., June 1999, at 78. More generally, on the various types of CACs, see Barry Eichengreen, *Restructuring Sovereign Debt*, J. ECON. PERSP., Fall 2003, at 83-84, and Eichengreen & Mody, *supra*, at 2. *See also* Jack Boorman, *Alternative Approaches to Sovereign Debt Restructuring*, 23 CATO J. 59, 65 (2003) (suggesting alternative characterization of various CACs); Bratton & Gulati, *supra* note 7 (same); Arturo C. Porzecanski, *A Critique of Sovereign Bankruptcy Initiatives*, BUS. ECON., Jan. 2003, at 39, 40. On the U.S. Department of the Treasury's conception of the various CACs, see Taylor, Using Clauses, *supra*, and Taylor, Sovereign Debt Restructuring, *supra*. Finally, to a similar extent, Nouriel Roubini and Brad Setser have described four potential configurations of the various contract provisions for sovereign debt restructuring: (1) The use of New York law documentation, which requires the unanimous consent of all creditors to change "key financial terms" (defined as payment dates and amounts), is the first possibility. All other terms would be subject to amendment by one-half to two-thirds of bondholders. Some New York law bonds, furthermore, require the support of twenty-five percent of bondholders to initiate litigation. (2) The second configuration involves the adoption of English law documentation, which allows seventy-five percent of bondholders present at any meeting at which there is quorum to amend any terms. Litigation limitations are also common in English law bonds. (3) Another option, the draft clauses prepared by the G-10, would adopt the English law convention, with additional provisions to encourage the use of trustees and thereby facilitate communication. (4) Finally, the Group of Six, comprised of major creditors, has also drafted proposed terms, which would allow amendment of a broader set of "financial terms" by eighty-five percent of bondholders, so long as no more than ten percent of bondholders object. Other terms can be amended by seventy-five percent of bondholders, with the exception of terms concerning the ability of creditors to sue, which would not be subject to amendment. Finally, the debtor would have to meet additional disclosure requirements and would be liable for the expenses of a creditor committee. *See* Roubini & Setser, *supra* note 14, at 8-9; *see also* Buchheit & Gulati, *supra* note 12, at 1329.

[16] *See* Bratton & Gulati, *supra* note 7. Thus, the sovereign debt market is primarily divided between English and New York law bonds. *See id.* at 30; Eichengreen, *supra* note 15, at 84, 85 tbl.2 (noting that at the end of 2001, seventy percent of international sovereign bonds outstanding were issued under New York or German law); Richard Portes, *The Role of Institutions for Collective Action*, *in* MANAGING FINANCIAL AND CORPORATE DISTRESS: LESSONS FROM ASIA 64 (Charles Adams et al. eds., 2000); *see also* EICHENGREEN ET AL., *supra* note 14, at 3 nn.2-3, 35 n.47; Eichengreen & Mody, *supra* note 15, at 8; Porzecanski, *supra* note 15, at 39, 40 n.4; Roubini & Setser, *supra* note 14, at 13 n.9; Taylor, Using Clauses, *supra* note 15.

[17] *See* Ashoka Mody, What Is an Emerging Market? (Apr. 2004) (unpublished manuscript, on file with author).

action, but instead required unanimous action for changes to the basic financial terms.[18]

The divergence between London and New York restructuring provisions can be traced back to corporate bond issuances in England and the United States in the late nineteenth century. In the early 1800s, corporate bonds in England and elsewhere included no provision for collective decisionmaking.[19] Rather, alteration of payment terms could only be accomplished with the unanimous consent of bondholders.[20] Yet this requirement led to the forced liquidation of many borrowers that faced merely a liquidity, rather than solvency, crisis.[21] In addition, it allowed holdout creditors to threaten liquidation, in order to secure side payments at the expense of other creditors.[22] To overcome these difficulties, in 1879, Francis Beaufort Palmer, an English barrister, introduced the possibility of majority action clauses in corporate bond issues.[23] Such clauses would permit a supermajority of creditors to approve a deferment or change in payment terms, which would then be binding on all creditors.[24] Such clauses quickly caught on, and remain a standard feature of both corporate and sovereign bonds issued under English law. For the minority of sovereign debtors that issue their debt under English law, including even a few developing country debtors, who generally issue under New York law, majority action is therefore available to overcome collective action obstacles to debt restructuring.

In the United States, by contrast, MACs were not widely introduced in the late 1800s, for at least three reasons.[25] First, issuers and investors worried that bonds containing MACs would not qualify as negotiable instruments and would therefore lack marketability.[26] Second, in the late nineteenth century, when MACs were coming into fashion in England, the majority of U.S. bonds were being issued to foreign investors who, it was feared, might hesitate to buy

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[18] The same was long true of bonds issued under German law, *see* Taylor, Using Clauses, *supra* note 15, and Japanese law, *see* Bratton & Gulati, *supra* note 7.

[19] *See* Buchheit & Gulati, *supra* note 12, at 1324.

[20] *See id.*

[21] Such borrowers could well have been saved by a short deferment or reduction in payments. *See id.*

[22] *See id.*

[23] *See id.* at 1325; *see also* EICHENGREEN ET AL., *supra* note 14, at 32.

[24] *See* Buchheit & Gulati, *supra* note 12, at 1324.

[25] Other reasons might also be offered for the absence of MACs in New York law bonds. *See* Bratton & Gulati, *supra* note 7; *see also* David A. Skeel, Jr., *Can Majority Voting Provisions Do It All?*, 52 EMORY L.J. 417 (2003).

[26] *See* Buchheit & Gulati, *supra* note 12, at 1326 (noting negotiable instruments law requirement that bonds contain "an unconditional promise or order to pay a sum certain in money").

bonds that could be altered by majority vote.[27] Finally, due to a wave of mergers in the 1800s, the corporate structure of most U.S. railroads—the primary issuer of corporate bonds—was extremely complex, with the number of different classes of bonds too great for MACs to be effective.[28]

In lieu of MACs, the United States employed a variety of other methods to assist financially distressed debtors and avoid holdout creditor problems. Around 1848, debtors and creditors turned to equity receiverships, by which a court appointed a receiver for borrowers nearing default, in conjunction with whom the debtor and its creditors negotiated a reorganization plan.[29] Most commonly, such plans involved selling the debtor's assets to a new company organized by creditors of the old company.[30] Potential holdout creditors generally agreed to these plans for lack of any viable alternative.[31]

The use of equity receiverships, however, began to decline after creation of the U.S. Securities and Exchange Commission (SEC) in 1934. One of the SEC's first acts was to prepare a report that concluded that equity receiverships were unfair to investors.[32] Yet the SEC did not have a taste for MACs either. It feared that corporate insiders who owned equity in financially distressed borrowers would buy up a majority of MAC bonds,[33] and then vote to defer payment or change the terms of those bonds. The equity owners would thereby invert "the normal priorities in a corporate bankruptcy by which a company's debt holders are paid off before the equity holders."[34]

Thus, instead of promoting MACs as a substitute for equity receiverships, Congress added section 77B to the U.S. Bankruptcy Act in 1934. A precursor to Chapter 11, section 77B provided for debt reorganization under the supervision of a bankruptcy court. With the knowledge that debtors could now avoid liquidation, by relying on section 77B,[35] Congress went further, to enact section 316(b) of the Trust Indenture Act (TIA).[36] This section essentially precluded the introduction of MACs in corporate bond instruments, by

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27 *See* Skeel, *supra* note 25, at 420.

28 *See id.* at 420-21.

29 *See* Buchheit & Gulati, *supra* note 12, at 1327.

30 *See id.*

31 *See id.*

32 *See* SEC. AND EXCH. COMM'N, REPORT ON THE STUDY AND INVESTIGATION OF THE WORK, ACTIVITIES, PERSONNEL AND FUNCTIONS OF PROTECTIVE AND REORGANIZATION COMMITTEES 10-60 (1937-1940).

33 *See* Buchheit & Gulati, *supra* note 12, at 1328.

34 *Id.*

35 *See id.* at 1329.

36 Trust Indenture Act of 1939, ch. 411, 53 Stat. 1172 (codified as amended at 15 U.S.C. § 77 (2000)).

"prohibit[ing] any reduction in the amount due under a publicly issued corporate bond without the consent of each affected bondholder."[37] U.S. corporate bonds therefore became unanimous action bonds, by definition.[38]

The TIA's bar on collective action, however, did not speak to sovereign bond issuances. Nonetheless, nearly all sovereign debt issued under New York law came to exclude MACs as well. Among other explanations for this pattern, it has been suggested that drafting inertia in the large law firm practice groups often responsible for drafting both types of debt contracts—a path dependence of form contracts—may be behind this pattern.[39] The network theory of sovereign debt contracting offered herein might also be important.[40] Regardless of the particular cause, unanimous action requirements came to dominate sovereign debt contracts to nearly the same extent they did corporate debt. Given emerging markets' preference for New York law, meanwhile, UACs emerged as the dominant norm in sovereign debt contracts as a whole.

B. Holdout Creditors and the Bumpy Road to Debt Restructuring

As noted above, unanimous action requirements give rise to significant collective action problems in sovereign debt restructuring.[41] In essence, unanimous action provisions require a difficult and time-consuming, if not impossible, effort to secure the agreement of every creditor, in order for a restructuring plan to proceed.[42] UACs thus enable a dissenting, holdout creditor to sue for full repayment, and thus delay restructuring until the debtor or other creditors pay a premium to secure the holdout's agreement.[43] The possibility of this result, of course, may deter creditors as a whole from consenting to a restructuring plan, preventing the return of the sovereign debtor

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[37] *Id.* It bears noting that the English regime does not rely exclusively on MACs to facilitate corporate restructuring, but now has its own bankruptcy process. Even if all relevant bonds of a given corporation include MACs, other debts of the corporation necessarily require some form of bankruptcy regime.

[38] Until the adoption of the TIA in 1939, MACs were relatively rare in the United States, but not unheard of. *See* Bratton & Gulati, *supra* note 7. *See generally* Buchheit & Gulati, *supra* note 12. Thus, the sharp divergence between New York and English law debt restructuring provisions is of recent provenance. *See* Portes, *supra* note 16, at 68 n.43.

[39] *Cf.* Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporation Contracting (Or "The Economics of Boilerplate")*, 83 VA. L. REV. 713, 718 (1997); Michael Klausner, *Corporations, Corporate Law, and Networks of Contracts*, 81 VA. L. REV. 757, 762, 785 n.89 (1995).

[40] *See infra* Part II.B.

[41] *See supra* notes 8-13 and accompanying text.

[42] *See* Felix Salmon, *Bond Investors Feel the Pinch*, EUROMONEY, Nov. 2002, at 90.

[43] *See* Lee C. Buchheit, *Majority Action Clauses May Help Resolve Debt Crisis*, INT'L FIN. L. REV., Aug. 1998, at 13.

to financial health and stability.[44] In the case of corporate debt, this strategic dynamic is readily curtailed. The bankruptcy system, with its automatic stay and other restructuing provisions, obviates holdout creditor problems in corporate restructuring. In the international financial order, however, no bankruptcy regime is available as a fall back. Nor are creditors likely to find significant assets to attach.[45] Consequently, holdout creditor and other collective action obstacles are far greater barriers to sovereign debt restructuring than corporate restructuring.[46]

Until the 1990s, however, holdout creditors remained a limited concern even in sovereign debt restructuring, because notwithstanding the prior use of bonds in sovereign finance,[47] the primary source of emerging market financing by the 1980s was syndicated bank loans.[48] Sovereign debt creditors were primarily repeat player banks with concentrated holdings. Expectations of future encounters, and resulting reputational constraints, reduced the incentive to hold out for more favorable restructuring terms.[49] Following the emerging

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[44] *See* Choi & Gulati, *supra* note 5, at 939; Christopher C. Wheeler & Amir Attaran, *Declawing the Vulture Funds: Rehabilitation of a Comity Defense in Sovereign Debt Litigation*, 39 STAN. J. INT'L L. 253, 259-60 (2003).

[45] *See* Schwarcz, *supra* note 8, at 960 n.16. The political dimensions of sovereign financial distress also distinguish it from domestic corporate bankruptcy.

[46] The nearly universal application of the TIA's bar on majority action to sovereign debt contracts, notwithstanding its formal inapplicability, is particularly puzzling in this light. *See supra* notes 36-40 and accompanying text.

[47] *See* Buchheit & Gulati, *supra* note 12, at 1334-35.

[48] *See* Bratton & Gulati, *supra* note 7; Eichengreen, *supra* note 15, at 81; Barry Eichengreen & Richard Portes, Debt Restructuring With and Without the IMF 15, 17 (Feb. 2000) (unpublished manuscript, on file with author).

[49] *See* Benjamin Klein & Keith Leffler, *The Role of Market Forces in Assuring Contractual Performance*, 89 J. POL. ECON. 615 (1981). Sovereign debt restructuring can be modeled as a standard-form Prisoner's Dilemma game among creditors. In this familiar dynamic, a creditor will secure a higher payoff if he, *and he alone*, defects from an agreed restructuring plan by demanding, for example, a side payment for his participation. If all creditors act on this common incentive, however, the ultimate payoff to each creditor is lower than if none had defected from the original agreement. In sovereign debt contracting, the latter would occur if the sovereign debtor simply declined to restructure, or pay, as Argentina essentially has in recent years.

One way to avoid defection in Prisoner's Dilemma games, however, is through repeat plays. *See* ROBERT AXELROD, THE EVOLUTION OF COOPERATION 10-11 (1984); Richard L. Revesz, *Congressional Influence on Judicial Behavior? An Empirical Examination of Challenges to Agency Action in the D.C. Circuit*, 76 N.Y.U. L. REV. 1100, 1111 (2001). In essence, if a given participant knows that he will participate in the game successively, the return on any single defection, even if successfully executed (i.e., even if other players do not respond by altering their strategy), is dwarfed by the losses that follow from the relevant player's subsequent inability to secure agreement with its counterparts. In repeat Prisoner's Dilemma games, defection ceases to be a productive strategy. For this reason, a sovereign debt market financed by a handful of large banks—as distinct from the present financing of sovereign debt by an innumerable, anonymous, and constantly changing collection of small, individual bondholders—was less susceptible to holdout problems.

market debt crises of the 1980s, however, banks largely pulled out of emerging market finance and the sovereign debt markets turned back to bonds.[50] Yet bonds aggravate holdout creditor problems, and creditor coordination problems generally, because of the dispersion of bond debt among a wide universe of small, anonymous players, who are less likely to be subject to repeat player constraints.[51] This dynamic is further aggravated by the tradable nature of the relevant bonds.[52] The holders of a given sovereign bond issue are not only numerous and difficult to identify; they are constantly changing.[53]

Citing the consequent inefficiencies of unanimous action requirements, a growing array of academics and practitioners, developed countries, and official sector institutions, including the IMF, began to press for the abandonment of UACs in New York law bonds. The G-10 highlighted this need with its call for the replacement of UACs with CACs in 1996.[54] Encouragement from other international and national bodies, as well as individual attorneys, economists, and others, quickly followed.[55] Yet the market exhibited little receptivity to change. While English law bonds, as well as those of certain other jurisdictions, continued to include MACs, New York law bonds, encompassing the largest share of the sovereign debt market, continued to be issued with UACs, rather than CACs. UAC bonds were particularly preferred by emerging market debtors, moreover, for whom the choice of restructuring terms was

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Other collective action problems, including an inability to communicate effectively, were also of diminished importance.

[50] *See* Bratton & Gulati, *supra* note 7.

[51] *See* Choi & Gulati, *supra* note 5, at 939; Ronald J. Silverman & Mark W. Deveno, *Distressed Sovereign Debt: A Creditor's Perspective*, 11 AM. BANK. INST. L. REV. 179, 179-80, 183-84 (2003); Wheeler & Attaran, *supra* note 44, at 253 n.2; *see also* James A. Dorn, *International Financial Crises: What Role for Government?*, 23 CATO J. 1, 3 (2003); Eichengreen & Portes, *supra* note 48, at 21-22; Portes, *supra* note 16, at 63 (noting increased complexity of sovereign debt compositions following shift from bank to bond financing, given increased number of interested parties who are less susceptible to central bank pressure).

[52] *See* Silverman & Deveno, *supra* note 51, at 183-84. *See generally* Wheeler & Attaran, *supra* note 44, at 253.

[53] Yakov Amihud, Kenneth Garbade, and Marcel Kahan have described this dynamic as the dispersion and fluidity of bondholders. *See* Yakov Amihud et al., *A New Governance Structure for Corporate Bonds*, 51 STAN. L. REV. 447, 450 (1999).

[54] *See* Boorman, *supra* note 15, at 65; Anna Gelpern, *How Collective Action Is Changing Sovereign Debt*, INT'L FIN. L. REV., May 2003, at 19; Portes, *supra* note 16, at 66, 69-70 (describing G-7's encouragement of CACs); Barry Eichengreen, Crisis Resolution: Why We Need a Krueger-Like Process to Obtain a Taylor-Like Result 10 (Apr. 29, 2002) (unpublished manuscript, on file with author) [hereinafter Eichengreen, Crisis Resolution]; *see also* Barry Eichengreen, *Is Greater Private-Sector Burden Sharing Impossible?*, *in* REFORMING THE INTERNATIONAL MONETARY AND FINANCIAL SYSTEM 10 (Peter Kenen & Alexander Swoboda eds., 2000).

[55] *See* Buchheit & Gulati, *supra* note 12, at 1358; Choi & Gulati, *supra* note 5, at 971; Gulati & Skeel, *supra* note 4, at 1-2.

most important. No amount of pressure seemed to have any impact on this pattern.

1. An International Bankruptcy Regime?

In November 2001, in the wake of the dramatic collapse of the Argentine economy and ensuing social chaos, Anne Krueger, Deputy Managing Director of the IMF, proposed a radical restructuring of the international financial architecture by introducing a bankruptcy regime for sovereign states. Specifically, she proposed the creation of a Sovereign Debt Restructuring Mechanism under the auspices of the IMF, charged with facilitating efficient debt restructuring and thereby minimizing the need for the massive debt bailouts that had littered the 1990s.[56] As originally outlined, the IMF's SDRM plan was based on Chapter 11 of the U.S. Bankruptcy Code, and sought to define a binding set of rules that would allow crisis-stricken countries to work out their debts in an orderly fashion.[57] It also granted the IMF extensive new powers and placed decisionmaking authority squarely with the IMF,[58] drawing strong attacks.[59] The plan was consequently modified, with the IMF proposing a "twin track approach" to sovereign debt restructuring in 2002.[60] This revised proposal incorporated both a "contractual approach," encouraging the use of CACs in bond issuances, and a "statutory approach," which called for an

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[56] *See* Boorman, *supra* note 15, at 62; Eichengreen & Mody, *supra* note 15, at 3; Gulati & Skeel, *supra* note 4, at 3; *see also Battling Over the Bankrupt*, ECONOMIST, Oct. 5, 2002; Jennifer Galloway, *What CACs Lack*, LATINFINANCE, Dec. 2003, at 24.

[57] *See* Susanne Soederberg, *The International Dimensions of the Argentine Default: The Case of the Sovereign Debt Restructuring Mechanism*, 28 CAN. J. LATIN AM. & CARIBBEAN STUD. 97, 115 (2003). The country in crisis would be able to halt debt payments as it negotiated debt restructuring with private sector lenders, under the auspices of a new international judicial body. During such negotiations, the IMF would protect the debtor country from litigation. Ultimately, the conditions of repayment would be determined by a supermajority vote of the creditors. The terms would then be binding on all creditors and the debtor country. *See id.* The voting process would be overseen by the IMF, which would also adjudicate any disputes that arose. *See generally* Paul Blustein, *Bankruptcy System for Nations Fails to Draw Support*, WASH. POST, Apr. 2, 2003, at A14.

[58] *See* Soederberg, *supra* note 57, at 115.

[59] *See id.* The U.S. Treasury's criticism was driven at least in part by the fierce opposition to the SDRM on Wall Street, where bankers warned that capital flows to emerging markets would dry up if creditor rights were infringed. *See* Blustein, *supra* note 57. Emerging market governments likewise resisted the SDRM out of fear of losing access to cheap foreign funds. *See id.* Investors, finally, believed that the SDRM would submerge their interests to junior creditor status, causing the IMF to be repaid first, and in full, ahead of bondholders and other private sector creditors. *See* Felix Salmon, *SDRM Finds Few Friends in the Market*, EUROMONEY, Nov. 1, 2002, at 94.

[60] *See* Porzecanski, *supra* note 15, at 40.

SDRM, but with greater creditor control and no new powers for the IMF.[61] In particular, the new plan eliminated the IMF's control over any temporary suspension of payments and the precise restructuring of the debt.[62]

The revised SDRM would thus permit a supermajority of creditors to approve a debt restructuring agreement with the debtor country, either in anticipation of or after default.[63] Minority creditors would be bound by this restructuring agreement, thereby avoiding holdouts.[64] A supermajority of creditors could also vote to stay any litigation while the restructuring negotiations were proceeding in order to protect the sovereign's assets from deleterious legal action.[65] To facilitate ongoing economic activity, the creditors could also vote to give seniority to new private financing.[66] More controversially, the SDRM would provide a dispute resolution forum, akin to an international bankruptcy court, to administer creditor claims and resolve disputes between debtors and creditors.[67] This dispute resolution forum would have exclusive jurisdiction and its decisions would be legally binding on all IMF member nations.[68]

The SDRM proposal was seen by its proponents as having several advantages over CACs as a solution to the shortcomings of UACs, even assuming the market's longstanding resistance to CACs could actually be overcome. First, upon ratification of the SDRM, its provisions would be immediately applicable to all sovereign debt, including previously issued bonds.[69] Thus, the SDRM would universalize the treatment of sovereign debt.[70] By contrast, because of their contractual nature, CACs would only apply to those future bonds in which they were included. To achieve greater universality, sovereign debtors would have to agree to exchange existing bonds with UACs for new CAC bonds, potentially at great cost and only after an extended delay. Additionally, while CACs permit restructuring of a single debt instrument, they do not effectively facilitate coordination among creditors

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61 *See* Boeri, *supra* note 12, at 246; *Battling Over the Bankrupt*, *supra* note 56. On the revised proposal, see Bratton & Gulati, *supra* note 7.

62 *See* Soederberg, *supra* note 57, at 117.

63 *See* Boorman, *supra* note 15, at 62.

64 *See id.*

65 *See id.*

66 *See id.*

67 *See* Boeri, *supra* note 12, at 248.

68 *See id.* The SDRM would be created by amending the IMF's Articles of Agreement, by a two-thirds vote of IMF shares. *See id.* at 247.

69 *See* Boorman, *supra* note 15, at 62; Gelpern, *supra* note 54, at 20.

70 *See* Salmon, *supra* note 59, at 94.

holding distinct debt instruments.[71] The SDRM, on the other hand, could serve to coordinate restructuring more generally.[72] Finally, proponents of the SDRM argued that its bankruptcy tribunal would help promote good faith among creditors and between creditors and debtors, an essential need that might be more difficult to accomplish by way of a contractual approach.[73]

Yet there were also strong criticisms of the SDRM proposal. Perhaps most broadly, the SDRM was seen by many as a significant invasion of national sovereignty, well beyond existing—and already controversial—forms of IMF conditionality. To similar effect, the SDRM was criticized as a gross interference in the contractual autonomy of sovereign debtors and their creditors. In essence, an SDRM would rewrite bond contracts after the fact, notwithstanding the parties' indisputable awareness of the substantial potential for financial crises, and their decision not to address that potential prospectively, by contract. Following directly from the latter, the SDRM's diminishment of creditor rights was unsurprisingly objected to by creditors. However, it was also a concern for debtor states, which feared an increased cost of capital, if not exclusion from the international debt markets, if an SDRM were introduced.[74] Institutional concerns were also voiced. In particular, given that the IMF is a party to the relevant sovereign credit relationship, as a creditor, a preference for IMF interests might be expected in any SDRM-driven restructuring. Unless complete independence from the IMF could be assured, private creditor interests might therefore be especially jeopardized under an SDRM. Finally, particularly given the foregoing array of risks and the substantial costs of an SDRM, many questioned whether such a regime was even necessary.[75]

2. *Institutional Versus Contractual Remedies to the Restructuring Dilemma*

With the IMF's SDRM proposal in November 2001, the battle between institutional change and contractual change in the evolution of the sovereign debt regime was joined. To one side stood those who continued to encourage the replacement of UACs with CACs as the appropriate, and fully adequate, remedy to the collective action problems of the existing UAC regime. Most

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[71] *See* Boorman, *supra* note 15, at 62.

[72] *See id.*; Gelpern, *supra* note 54, at 20.

[73] *See* Gelpern, *supra* note 54, at 20; *see also infra* notes 302-10 and accompanying text.

[74] *See* Hal S. Scott, *A Bankruptcy Forum for Sovereign Debtors?*, 37 INT'L LAW. 103, 103 (2003).

[75] On the criticisms of the SDRM, see Eichengreen, Crisis Resolution, *supra* note 54, at 18-20. *See also supra* note 59.

prominently, this group included the United States, most private creditor representatives and institutions, and even a number of emerging market debtors. On the other side were those, including the leadership of the IMF and a substantial part of its membership, that favored adoption of an SDRM of one sort or another.[76] At least at the outset, the United States and several other G-7 members resisted any alternative to the contractual approach of CACs.[77] At the IMF's 2002 annual meeting, however, the G-7 endorsed the IMF's "twin track approach," including the SDRM.[78] Even the United States signaled some receptivity to the SDRM.[79]

Many saw this endorsement as purely strategic, however, serving to signal to emerging market debtors and private sector lenders that if they resisted the United States's preferred approach of CACs for too long, things might prove much worse.[80] This assessment arguably gains credence from the IMF's ensuing decision, made at the April 2003 meeting of the International Monetary and Financial Committees, to prioritize the contractual approach and put the SDRM proposal on hold.[81] Rather than finalize an SDRM proposal at the meeting, as was intended, the IMF instead abandoned it in favor of the contractual approach.[82]

Yet this decision was not entirely surprising, given the much more dramatic announcement by Mexico, only a few weeks earlier, that it was offering an unexpected $1 billion bond issue. The latter would be issued under New York law. Breaking with the nearly universal convention, however, Mexico announced that the bond would include CACs.[83] The new bond contracts thus permitted amendment of basic financial terms, including payment and timing terms, upon approval of seventy-five percent of aggregated principal amounts

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[76] *See* Boorman, *supra* note 15, at 62. Generally, support for the SDRM was stronger in Europe than the United States. *See* Alan Beattie, *U.S. Set to Block "Sovereign Chapter 11" Proposals*, FIN. TIMES, Mar. 31, 2003, at 13; Blustein, *supra* note 57.

[77] *See* Boeri, *supra* note 12, at 246; *see also Bush Plan to Let Struggling Nations Rework Payment Terms Backed*, BOSTON GLOBE, Apr. 10, 2002, at C7.

[78] *See* Boeri, *supra* note 12, at 246-47; Felix Salmon, *Market Resists Restructuring Reform*, EUROMONEY, Oct. 1, 2002, at 18.

[79] *See* Taylor, Using Clauses, *supra* note 15; *see also* Gulati & Skeel, *supra* note 4, at 3; *infra* Part III.B.1.

[80] *See Battling Over the Bankrupt*, *supra* note 56; Beattie, *supra* note 76, at 13.

[81] *See* Rupert Cornwell, *U.S. Forces IMF to Shelve Debt Default Scheme*, INDEPENDENT, Apr. 11, 2003, at 22; *Dealing with Default*, ECONOMIST, May 10, 2003, at 63.

[82] *See* EICHENGREEN ET AL., *supra* note 14, at 3.

[83] *See id.* at 3, 9; Gelpern, *supra* note 54, at 19.

outstanding.[84] Contrary to long-standing speculation, moreover, investors did not impose any discount on the bonds, notwithstanding their inclusion of CACs.[85]

With Mexico's decision, the floodgates quickly opened. Mexico issued an additional $2.5 billion in New York law bonds in April 2003, again with collective action provisions.[86] On April 10, 2003, Uruguay followed Mexico's lead, offering an exchange of its existing UAC bonds for new bonds with CACs.[87] Uruguay's CACs were similar to those in the Mexican issuance, but also included a limit on future exit consents,[88] a bar on issuing new debt to dilute a restructuring vote, and a tighter set of nonreserve amendment rules.[89] In addition, the Uruguay exchange contract included the first aggregation voting provision, or "super-CAC," in a bond.[90] In essence, this provision will allow Uruguay's creditors to amend multiple bond instruments in a single vote.

This surprising trend toward CACs in New York law bonds continued with Brazil's issuance of $1 billion in New York bonds containing CACs on April 29, 2003.[91] The latter represented yet a further leap forward, as Brazil was the first speculative grade issuer to use CACs; that it did so with an eighty-five percent threshold for restructuring, versus the seventy-five percent standard of English law and the recent New York law bonds, was yet a further innovation.[92] Brazil's issuance was quickly followed by new CAC issues by South Africa and South Korea.[93] Finally, Argentina announced that it too would include CACs in its new debt issues.[94] By the end of 2003, consequently, the contracting norm under New York law had come to dictate

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84 *See* EICHENGREEN ET AL., *supra* note 14, at 3, 9.

85 *See id.*; *see also* Choi & Gulati, *supra* note 5, at 971. In point of fact, even prior to Mexico's issue, other sovereign debt issues under New York law had included CACs, but their small size, private placement, or other exceptional characteristics seem to have kept them off observers' radar screens. These included placements by Thailand, Lebanon, Egypt, and Qatar. *See* EICHENGREEN ET AL., *supra* note 14, at 3, 9; Bratton & Gulati, *supra* note 7; *see also* Choi & Gulati, *supra* note 5, at 960-62.

86 *See* EICHENGREEN ET AL., *supra* note 14, at 3, 9.

87 *See Dealing with Default*, *supra* note 81, at 63.

88 *See infra* notes 243-44 and accompanying text.

89 *See* Gelpern, *supra* note 54, at 21-23.

90 *See id.*; Gulati & Skeel, *supra* note 4, at 4-5; *Dealing with Default*, *supra* note 81, at 63. On Uruguay's various innovations, see Choi & Gulati, *supra* note 5, at 945.

91 *See* Skeel, *supra* note 25, at 418 n.3; *Dealing with Default*, *supra* note 81, at 63.

92 *See* EICHENGREEN ET AL., *supra* note 14, at 3, 9. Guatemala has since also adopted an eighty-five percent threshold. *See* Choi & Gulati, *supra* note 5, at 979.

93 *See* Jacques de Larosiere, *Reality Hits Debt Restructuring Debate*, BANKER, Sept. 2003, at 26.

94 *See* Gulati & Skeel, *supra* note 4, at 5. Yet additional countries have since followed. *See* Choi & Gulati, *supra* note 5, at 943, 947.

the incorporation of collective action provisions for restructuring.[95] After nearly a century of the persistent dichotomy of unanimous and collective action restructuring provisions, years of unrequited pressure on New York law issuers to shift from UACs to CACs, and every reasonable expectation that nothing would change anytime soon, it did—overnight.

II. A NETWORK THEORY OF SOVEREIGN DEBT CONTRACTING

In the face of the long resistance of the New York law sovereign debt market to the seeming efficiencies of collective action, and its consequently surprising, yet rapid and wholesale, embrace of the latter in 2003, many have puzzled over the nature and dynamics of sovereign debt contracting and legal transition. Gulati and Skeel have described the recent shift as more in the nature of "science" than "rational actor economics."[96] Yet both the stasis and change in New York law sovereign bond contract practice can be understood from an economic perspective. It is the perspective of microeconomics, however, rather than the more familiar macroeconomics of sovereign debt and international finance. Specifically, the microeconomic phenomenon of network effects suggests there should be little surprise at the otherwise incongruous patterns of stasis and change in sovereign debt contracting.[97]

A. Toward a Network Conception of Sovereign Debt Contracting

Network effects arise when the utility of a good to one user increases as other users acquire or utilize it.[98] A telephone, for example, is only valuable to

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[95] *See Dealing with Default*, *supra* note 81, at 63.

[96] *See* Gulati & Skeel, *supra* note 4, at 6.

[97] While the analysis herein seeks to describe the broad influences of network effects in sovereign debt contracting, it is not intended to deny the importance of individual and institutional agency in the actualization of the network outcomes I identify. To the contrary, network effects in sovereign debt contracting are important insofar as they alter the strategic calculus of individual debtors and creditors. Given network effects, thus, I suggest that parties to sovereign debt contracts are more likely to affirmatively choose a dominant standard or term, rather than an otherwise preferable, but less common, standard or term. Network effects in sovereign debt contracting are thus not abstractions that stand behind market design; they are concrete elements in shaping the consumption patterns of individual market participants.

[98] *See* Mark A. Lemley & David McGowan, *Legal Implications of Network Economic Effects*, 86 CAL. L. REV. 479, 481 (1998) (describing network markets as those "in which the value that consumers place on a good increases as others use the good"); Howard A. Shelanski & J. Gregory Sidak, *Antitrust Divestiture in Network Industries*, 68 U. CHI. L. REV. 1, 5 (2001) ("A network externality, or 'network effect,' exists when the value of a product or service increases with the breadth of demand for that product or service."); *see also* Gideon Parchomovsky, *Publish or Perish*, 98 MICH. L. REV. 926, 945 (2000); Larry E. Ribstein & Bruce H. Kobayashi, *Choice of Form and Network Externalities*, 43 WM. & MARY L. REV. 79, 110 (2001). I use the

me if others own receivers as well. More importantly, its value to me grows as additional receivers are purchased and placed into service.[99] Of greatest importance for present purposes, the presence of such network effects can impact consumption patterns. Network effects are thus a form of positive consumption externality. The social gain from my adoption of a given network technology can be expected to exceed my individual gain. Consumption may therefore be suboptimal. Additionally, given the relative importance of network size to a given consumer, the latter will adopt a relatively "inferior" good (i.e., one that provides fewer desired services or capacities), if it nonetheless possesses a larger network of users than its (otherwise superior) competitor. In the aggregate, substantial welfare inefficiencies may result.

Scholars have argued that network effects may influence the choice of terms in corporate contracts, including corporate bond indentures. Most prominently, Michael Klausner and Marcel Kahan have drawn on network economics to challenge the efficiency assumptions of corporate law's contractarian paradigm.[100] In essence, they argue that contracting parties will

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term "network effects," rather than "network externalities," as the latter would seem to assume a market failure, which may or may not arise from any given network effect. *See* S. J. Liebowitz & Stephen E. Margolis, *Network Externality: An Uncommon Tragedy*, J. ECON. PERSP., Spring 1994, at 133, 135; *see also* Lemley & McGowan, *supra*, at 482 n.5.

[99] *See* Klausner, *supra* note 39, at 772; Lemley & McGowan, *supra* note 98, at 488 (noting that "owning the only telephone or fax machine in the world would be of little benefit because it could not be used to communicate with anyone"). On the growth in network utility with additional users, see Michael L. Katz & Carl Shapiro, *Network Externalities, Competition, and Compatibility*, 75 AM. ECON. REV. 424 (1985); Lemley & McGowan, *supra* note 98, at 488–89 ("The value of the telephone or fax machine one has already purchased increases with each additional purchaser, so long as all machines operate on the same standards and the network infrastructure is capable of processing all member communications.").

By contrast with the telephone, the owner of a particular tea kettle may find great utility in its water capacity, built-in whistle, or other inherent qualities, but has relatively little interest in the number of other tea drinkers, let alone users of their particular kettle. The utility derived from a tea kettle thus turns on its inherent value, while that of a telephone arises from the size of its network of users. *See* Carmine Di Noia, *Competition and Integration Among Stock Exchanges in Europe: Network Effects, Implicit Mergers and Remote Access*, 7 EUR. FIN. MGMT. 39, 52 (2001) ("Positive network externalities (the benefit to an individual increases in the number of others on the system) arise when a good is more valuable to a user the more users adopt the same good or a compatible one."); Katz & Shapiro, *supra*, at 424 ("[T]he utility that a given user derives from the good depends upon the number of other users who are in the same 'network.'").

[100] *See* Kahan & Klausner, *supra* note 39; Klausner, *supra* note 39; *see also* Lucian Arye Bebchuck, *Federalism and the Corporation: The Desirable Limits on State Competition in Corporate Law*, 105 HARV. L. REV. 1435, 1498-94 (1992); Jeffrey N. Gordon, *The Mandatory Structure of Corporate Law*, 89 COLUM. L. REV. 1549, 1567-69 (1989). Initially, Klausner argued that network externalities might be present in corporate contract terms. *See* Klausner, *supra* note 39, at 774-75. Together, Kahan and Klausner elaborated on this analysis, identifying two important sources of value in standard contract terms: (1) "learning benefits" that arise when a firm adopts a contract term that has been commonly used in the past, regardless of whether firms will continue to use it in the future, *see* Klausner, *supra* note 39, at 776 n.61, 779, and (2) "network benefits"

commonly elect to adopt a more widespread contract term—one whose existing and future user base is larger—because such standardized terms offer substantial value above and beyond the intrinsic, or inherent, value of the term, in isolation.[101] Such network benefits of a particular corporate contract term are analogous to the benefits of conventional network goods, such as personal computers, which produce greater or lesser value to users depending on whether they are used commonly or rarely.[102] An IBM-compatible personal computer thus produces two categories of benefits. First, there are its inherent benefits, arising from uses unrelated to the number of other individuals that use a compatible model. The ease of typing a letter on a particular word processor, for example, might be construed as an inherent benefit of a given computer system.[103] A computer also offers network benefits, however, which are dependent "on how many people own [and will own] PCs and thereby create markets for compatible software, hardware, and repair services." As a result, "widespread use of a PC has a value to a user independent of the inherent value of the product."[104]

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that arise when a firm adopts a term that will be simultaneously included in other firms' contracts and will consequently be used in the future, *see* Kahan & Klausner, *supra* note 39, at 719-25; Klausner, *supra* note 39, at 786, 788, regardless of whether it has been widely used in the past. *See generally* Kahan & Klausner, *supra* note 39, at 718.

Although it is not the focus of this Article, a brief explanation of Klausner and Kahan's learning benefits is in order. Learning benefits are a component of the inherent value of a term, gained through previous experience with it. *See id.*; *see also* Lemley & McGowan, *supra* note 98, at 568 ("Learning benefits refer to the value imbued in a given term through previous experience . . . . [F]or purposes of network theory, Klausner categorizes these as inherent rather than network benefits, reserving the latter term for those benefits accruing through contemporaneous use of a term by other firms."). In essence, a contract term that has been commonly used in the past may have generated a degree of learning that is valuable to current users of that term. *See* Kahan & Klausner, *supra* note 39, at 719. In Kahan and Klausner's enumeration, such learning benefits arise in at least three ways. First, the potential for error is lower, when the present formulation of a term reflects improvements made in the past, based on implementation in a variety of circumstances, and examination and reform by many prior users. *See id.* at 720-21. Second, learning benefits come in the form of past precedents, which reduce uncertainty over interpretation of a term in the future. *See id.* at 722-23. Finally, the familiarity of legal and financial professionals with a given term may reduce the costs and improve the quality of professional advice. *See id.* at 723.

101 *See* Kahan & Klausner, *supra* note 39, at 730-35; Klausner, *supra* note 39, at 806-07.

102 *See* Klausner, *supra* note 39, at 772.

103 *See id.*

104 *Id.* at 763-64. As I describe *infra*, the preference for standardization in network environments is relative, not absolute. *See infra* Part IV.C. Thus, even significant network effects may not produce complete convergence, as the inherent benefits of the nondominant standard to some users, given their particular utility preferences, may outweigh the network gains from adopting the common standard. The long coexistence of a UAC network under New York law and a smaller MAC network under English law is therefore fully consistent with a network analysis. *See infra* Part IV.C.

Corporate contract terms may produce analogous network effects, because firms that use a particular contract term—like Apple computer users—form a "network . . . linked together by commonly used complementary products."[105] Among other possibilities, contractual network benefits include professional expertise, pricing knowledge, and a body of judicial precedents developed during the time the firm incorporates the given term in its contracts.[106] As described by Russell Korobkin:

> Contract terms might become more valuable as more parties adopt them, for example, because wider use of a term can lead to more judicial opinions interpreting the term. More interpretations, in turn, can benefit users of the term by reducing uncertainty over how the term would be interpreted by a court should the user become embroiled in litigation in the future. Widespread use of a contract term can also create benefits for users by making lawyers and other providers of legal services more facile in drafting, negotiating, interpreting, and, if need be, litigating the term. Such facility can create value to term users by increasing . . . [its] value in the capital markets . . . . In short, widespread use of a contract term can benefit users of the term by causing complementary goods (such as judicial precedents or professional services) to become more available, cheaper or both.[107]

Network effects can be predicted in sovereign debt contracting as well. Much of the study of network effects in corporate contracts, in fact, has focused on bond indenture terms. Many of the sources of network effects in corporate contract are thus equally likely to arise in sovereign debt contracts. Perhaps most importantly, sovereign debt contracts are likely to be shaped by

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[105] *See* Klausner, *supra* note 39, at 774-89. Just as PCs are linked together by complementary software and hardware, firms that use a common contract term are linked together by complementary goods including relevant judicial precedents and professional services. *See id.* at 757-59, 782-84; Russell Korobkin, *Inertia and Preference in Contract Negotiation: The Psychological Power of Default Rules and Form Terms*, 51 VAND. L. REV. 1583, 1594-95 (1998).

[106] *See* Kahan & Klausner, *supra* note 39, at 726-27.

[107] Korobkin, *supra* note 105, at 1594-95. As suggested above, in extending a network analysis from its technological origins to contracting practices, it is important not to overstate the network preference for standardization. As I describe *infra*, in Part IV.C, the presence of network effects does not dictate complete standardization. Rather, the inherent value of a unique term might outweigh the network benefits of the standard term in any given case. In contracting practices, this may help to explain the value of legal counsel's capacity for innovation, and perhaps even the general jockeying between parties for contract advantage. *See* Marcel Kahan & Michael Klausner, *Path Dependence in Corporate Contracting: Increasing Returns, Herd Behavior, and Cognitive Biases*, 74 WASH. U. L.Q. 347, 350 (1996) (describing the benefits of innovation). In essence, such innovation might constitute an effort to maximize contract value on those terms as to which network effects do not strongly favor standardization.

what Klausner terms "marketing" network effects.[108] Such effects arise from the nature of present-day sovereign debt. Until the late 1980s, sovereign debt consisted almost entirely of syndicated bank loans.[109] Such loans were subject to limited prospect of resale or transfer. As such, the terms of the relevant debt contracts were of importance almost exclusively to the originator of the debt, and there was little need to conform those terms to any more uniform set of market standards.

With the shift to sovereign bonds, this pattern was turned on its head. Bonds are widely dispersed and subject to active trading on secondary markets. Such trading, in turn, creates a strong preference for standardized terms. Standard terms, with which the market is familiar, can be expected to maximize the ease of resale—the tradability—of a given bond. Selection of contract terms that are and will be used more widely therefore enhances a bond's value on the secondary market.

Klausner and Kahan primarily ground the network effects that naturally follow from such pressure for standardization—by which the value of a given term grows with its wider use—in the reduced cost of pricing more uniform corporate securities.[110] Lower cost of pricing, in turn, can reduce a firm's cost of capital, creating a "marketing" network effect favoring the standard term. In slightly broader terms, widespread use of a given term can be expected to produce more efficient and accurate pricing, by expanding the pool of relevant financial information and thereby improving price precision.[111] Standardized terms might also help to enhance bond value, in another iteration of marketing network effects, by increasing liquidity. This may apply not only to the particular bond issue involved, but also to later issues by the same sovereign.

While marketing network effects are given slightly less attention by Klausner and Kahan than some of the other sources of network effects they identify,[112] marketing effects are arguably the most important source of the network pattern in sovereign debt contracting. Several factors might produce relatively stronger marketing network effects in sovereign debt contracts than in corporate contracts. The first turns on the balance of network and inherent value in corporate versus sovereign contracts, including bonds. Obligations

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[108] *See* Klausner, *supra* note 39, at 785-86.

[109] *See supra* notes 47-50 and accompanying text.

[110] *See* Klausner, *supra* note 39, at 785; *see also* Marcel Kahan, *The Qualified Case Against Mandatory Terms in Bonds*, 89 NW. U. L. REV. 565, 586-87 (1995).

[111] *See* Ahdieh, *Making Markets*, *supra* note 5, at 285-88.

[112] *Cf.* Kahan, *supra* note 9, at 1079-80; Klausner, *supra* note 39, at 785-86.

held against a domestic corporation clearly have an inherent value, regardless of their network value. Even should trading in the given corporation's bonds be suspended, or the relevant corporation cease to be a going concern, its bonds retain value as a residual claim against the corporation's assets.[113] Such claims can be asserted in bankruptcy. The inherent value of sovereign bonds, by contrast, is far more constrained. Given the lack of any institutionalized system of sovereign bankruptcy, or other form of receivership, debt claims against a recalcitrant sovereign debtor are only as good as the market for their resale.[114] This has arguably been evident in the Argentine financial crisis of recent years.[115] In essence, Argentina has concluded that conciliation and compromise with its private creditors offers little promise of future reward and has consequently refused to negotiate.[116]

A related factor arises from the significantly greater prospect of default on sovereign bonds than corporate bonds. Given the greater likelihood of sovereign default, the tradability of a sovereign bond is necessarily more important. Such bonds, by comparison with corporate bonds, are relatively less likely to reach maturity. As such, their inherent value is more limited, and their network value proportionately greater.[117] Marketing network effects may thus be essential to the valuation of sovereign bonds than corporate bonds, given the latter's inherent value upon maturity.

The proportion of network to inherent value generally, and the significance of marketing network effects particularly, in sovereign debt versus corporate debt contracts may also be influenced by the degree of heterogeneity among borrowers. At least as they come to the debt markets, sovereign debtors may, as a group, be relatively more homogeneous than corporate debtors. Minimally, they may disaggregate into a more limited number of debtor categories. If this is so, then marketing network effects are again likely to be stronger in sovereign debt contracts. If differences among sovereign debtors are more limited, their inherent preference for distinct terms should also be less, and the relative value of participating in a larger network concomitantly

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113 *Cf.* Ahdieh, *Making Markets*, *supra* note 5, at 292-96 & n.69.

114 This is not to deny the potential of creditor pressure and threats of future exclusion from the debt markets to convince sovereign debtors to negotiate. It simply suggests that if the latter are ineffective, creditors have little recourse.

115 *See* Michael Casey & Michael M. Phillips, *Argentina Finds Middle Ground with IMF, Averts Loan Default*, WALL ST. J., Mar. 10, 2004, at A2.

116 *See id.*

117 *Cf.* Ahdieh, *Making Markets*, *supra* note 5, at 294-95.

that much greater.[118] In the marketing of more homogeneous sovereign debt, furthermore, investors are less likely to be seeking eccentric sources of arbitrage.

A final reason to predict relatively more significant marketing network effects in sovereign debt contracts turns on the sovereign debt markets' focus on the adverse implications of a shift from UACs to CACs, or to any relatively more liberal CAC formulation.[119] A significant barrier to an emerging market shift to CACs has been the fear that the latter might be interpreted as a signal of some greater prospect (or even expectation) of future debt restructuring. Given as much, network effects are likely to figure prominently in the choice of any given sovereign to continue to use UACs or to shift to CACs. If a growing tide of debtors is turning to CACs, any adverse implication for a given emerging market is likely to be reduced, if not eliminated, and transition rendered significantly easier.

Beyond marketing network effects, the other sources of network value Klausner and Kahan identify in corporate contracts are also likely to be present in sovereign debt contracts.[120] These include the value of future judicial rulings regarding a contract term—an "interpretive network externality"; the value of tracking "common practices" that are pursued by similarly situated firms using a given term; and the greater availability of legal services for the interpretation and implementation of more common terms.[121]

Interpretive network effects follow from the increase in relevant judicial decisions that can be expected to result from wider use of a given term.[122] Such decisions reduce uncertainty, and hence firms' cost of capital.[123] Perhaps most importantly, judicial decisions reduce uncertainty when they clarify

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118 *Cf.* Klausner, *supra* note 39, at 813-14, 817.

119 *Cf. id.* at 785.

120 It bears restating that I do not mean to offer any firm conclusion on the strength of network effects in sovereign debt contracting. Choi and Gulati have begun the effort to address this empirical question. *See* Choi & Gulati, *supra* note 5. Kahan and Klausner, among others, have used various empirical measures to explore the strength of network effects in corporate bond contracts. *See* Kahan & Klausner, *supra* note 39, at 740-60 (outlining empirical analysis of network effects in corporate bonds). By contrast, this Article concentrates on the origins of network effects in sovereign debt contracting, and suggests some of their important implications. Further, it attempts to theorize what might trigger transition in network environments, including sovereign debt contracting.

121 *See* Klausner, *supra* note 39, at 774-75.

122 *See* Lemley & McGowan, *supra* note 98, at 565.

123 *See* Klausner, *supra* note 39, at 777.

ambiguous or open-ended contract terms.[124] Consequently, the scope of interpretive network effects in a given contract depends on the proportion of its terms that require interpretation. If a contract is composed primarily of terms of a self-explanatory nature, judicial interpretation—and hence the size of the network of users of those terms—will be less important to the value of the contract, and network effects will be of less consequence. The greater the proportion of ambiguous terms, the more significant any network effects.

In sovereign debt contracts, judicial interpretation is likely to offer at least some network value. Under a UAC contract, for example, it is necessary to determine whether any given contract change comes within the enumerated list of changes to basic financial terms that require unanimous consent. Greater judicial clarity as to that enumeration is likely to reduce uncertainty. Judicial interpretation of sovereign debt contracts may have become even more important in recent years, moreover, given the rise of a variety of techniques by which emerging market countries have attempted to skirt the limitations of UACs.[125] Interpretive network effects may also have grown in importance given the sudden emergence of various forms of CACs under New York law. As these new and untested terms are adopted, judicial interpretation may be especially valuable. A particular source of interpretive network effects in sovereign debt contracts, in fact, may be the inevitable issues that newly adopted CACs raise regarding the majority's fair treatment of minority creditors.[126] Thus, intercreditor duties of good faith and fair dealing, which are essential to the efficacy of any CAC regime, will likely require active judicial interpretation.[127] At least some interpretive network effects are therefore likely in sovereign debt contracting.[128]

The next type of network effect identified by Klausner and Kahan, common practice network effects, also has application in the sovereign debt context.

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[124] Valuable judicial decisions, however, are not limited to those interpreting the terms themselves, but might also address how particular terms relate to relevant statutory or regulatory rules. *See* Klausner, *supra* note 39, at 776 n.62.

[125] *See infra* notes 241-49 and accompanying text.

[126] Notably, Klausner references the interpretation of such intercreditor duty provisions as a prime source of interpretive network effects in corporate contracts. *See* Klausner, *supra* note 39, at 775.

[127] *See* Bratton & Gulati, *supra* note 7; *cf.* Lemley & McGowan, *supra* note 98, at 573-74 (discussing interpretive network effects regarding good faith obligations in corporate contracts). As any interpretive network effects arising from the adoption of CACs obviously postdate the transition to CACs, they do not help to explain the longevity of UACs or the rapid shift to CACs. They may nonetheless be important in the ongoing evolution of CAC terms and in any future contract transition.

[128] Some features that make judicial decisions valuable in corporate contracts, however, may be less common in sovereign debt contracts. *See, e.g.*, Klausner, *supra* note 39, at 778 & nn.66-68.

These network effects arise from contract terms tied to the practices of contracting parties' peers; "reasonable notice" requirements provide an obvious example. Issues of intercreditor good faith under CACs may be the most relevant example. The obligations of sovereign debtors under certain collective action clauses, including provisions mandating disclosure, engagement, and the like, might also give rise to common practice network effects. In these cases, questions regarding any particular course of conduct in debt restructuring, whether with reference to disclosure, notice, or other procedural obligations, or with reference to the substantive terms of the restructuring, can best be assessed with an eye to others' practices regarding the same procedural or substantive obligation under identical contractual terms. Additionally, the existence of some common practice among a network of users of the same term may also help to insulate a debtor's or creditor's decision from adverse judicial review.

Legal services network effects, finally, also likely exist in sovereign debt contracts, given the complexity of bond indentures, the foundational contract of bond issues.[129] Legal services network effects may also have grown in significance in sovereign debt contracting in recent years, as sovereign debtors have pursued alternative avenues of restructuring.[130] Thus, Ecuador's ability to use exit consents to avoid the constraints of its UAC bonds[131] was grounded in the availability of effective legal counsel to advise it how to do so. Such opportunities are likely to be case—or contract—specific, and therefore dependent on the availability of legal counsel to assist in the assessment and application of a particular term.[132] Legal services network effects can therefore be predicted in sovereign debt contracts. The more standard a given clause is, the cheaper and better quality the legal services regarding its interpretation may be.

Another increasingly important source of legal services network effects in sovereign debt contracts is the need for legal counsel on the aforementioned questions of intercreditor duty. Majority action under CACs creates a risk of minority creditor abuse, against which courts and other regulators may act.[133] Yet the scope and nature of intercreditor duties remain unclear, creating an

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[129] *See* Klausner, *supra* note 39, at 784 n.87.

[130] *See infra* Part III.B.2. *But see supra* note 127.

[131] *See infra* notes 243-44 and accompanying text.

[132] Thus, not every UAC or CAC contract's terms are identical. *See* Stephen Choi & G. Mitu Gulati, *Why Lawyers Need to Take a Closer Look at Exit Consents*, INT'L FIN. L. REV., Sept. 2003, at 15.

[133] *See supra* notes 126-27 and accompanying text.

essential need for effective counsel, and an important source of legal services network effects, at least in the near future.

Finally, Klausner points to the benefits arising from the promptness of legal advice in certain circumstances, including mergers and acquisitions.[134] The same may be true in the sovereign debt context, given the transition process often underway, and the exigent dynamic that often attends a debt restructuring.[135] Given this need for speed, legal services network effects can also be predicted.

Interpretive, common practices, and legal services network effects may, like marketing network effects, be more significant in sovereign debt contracts than in corporate contracts for at least two reasons. Most importantly, it is relatively less likely that the demand for a given term will extend beyond the reach of network effects in sovereign debt contracting. To clarify, the welfare consequences of network effects are only significant if they encompass much of the demand curve for a given product or term. If network gains taper off early in the demand curve—if only a few additional users are enough to produce any and all network gains—then network effects become inconsequential. They are, in the terms of the network literature, "inframarginal."[136] By comparison, the extent of sovereign debt contract term usage and interpretation is nowhere near the "consumption" of corporate contract terms.[137] Consequently, network effects are relatively less likely to have tapered off below the requisite level of demand in sovereign debt contracts than in corporate contracts.[138]

As compared with corporate charters in particular, network effects may also be stronger in sovereign debt contracts because of the greater recurrence of the latter. Thus, sovereign debt contracts are issued by sovereigns with some regularity, sometimes as often as several times a year. Corporate

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134 *See* Klausner, *supra* note 39, at 783.

135 With the transition to CACs, additional legal service efficiencies might be expected in the drafting context. Just as UACs may have come to dominate sovereign debt contracts under New York law, on account of the existing expertise of New York counsel with corporate debt contracts, in which UACs were mandatory, *see infra* note 173, as drafting expertise increasingly shifts to the preparation of CACs, the relative cost of drafting UACs may grow, strengthening the preference for CACs in new sovereign debt issues. These effects are more in the nature of learning benefits, however, than network effects.

136 *See* Lemley & McGowan, *supra* note 98, at 573 n.403.

137 *Cf.* Ahdieh, *Making Markets*, *supra* note 5, at 288 n.40; Klausner, *supra* note 39, at 778-79. Furthermore, there is a less vigorous legislative check on adverse, or even erroneous, judicial interpretations in the sovereign debt context. *Cf. id.* at 778.

138 *See* Ribstein & Kobayashi, *supra* note 98, at 112.

charters, by contrast, are by nature a rare occurrence.[139] Thus, one might expect relatively less attention to be given to the drafting of sovereign debt contracts.[140] Boilerplate, and resulting standardization, is that much more likely, and more significant network effects can be expected to follow.

Of course, some features might be expected to reduce the significance of network effects in sovereign debt, versus corporate, contracts. To begin with, the population of relevant participants in sovereign debt contracting is smaller than in corporate contracting, increasing the possibility of effective communication or internalization of any network externalities.[141] Specific to the latter possibility, the more select universe of attorneys involved in the sovereign debt markets may serve as "norm entrepreneurs" of a sort,[142] internalizing network benefits and hence facilitating efficient contract transition.[143] This, in essence, is the pattern Choi and Gulati describe, with reference to the role of Cleary, Gottlieb, Steen & Hamilton in facilitating sovereign debt contract transition.[144]

There may also be relatively fewer open-ended or ambiguous terms in sovereign debt contracts than in corporate contracts.[145] As a result of this lack of ambiguity, and because there are fewer sovereign debt contracts generally, there are relatively fewer judicial interpretations of them.[146] Interpretive

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[139] Even amendments to corporate charters are relatively rare.

[140] At the Georgetown Conference on Sovereign Debt Restructuring at which this Article was presented, a participating banker commented that sovereign debt contracts are rarely read. Rather, in his view, bankers' priority is the standardization of terms, not their actual content.

[141] *See* Ribstein & Kobayashi, *supra* note 98, at 112-13.

[142] *See* Cass R. Sunstein, *Social Norms and Social Roles*, 96 COLUM. L. REV. 903, 968 (1996).

[143] *See* Ribstein & Kobayashi, *supra* note 98, at 12-13; *see also* Lemley & McGowan, *supra* note 98, at 578. On the other hand, there may be relatively less competition for legal services in sovereign debt contracting than corporate contracting, reducing the degree of "entrepreneurship."

[144] *See* Choi & Gulati, *supra* note 5, at 950 tbl.2. If the relevant universe of sovereign debt participants is construed not as the universe of sovereign debt debtors and creditors, but as the rather limited collection of (mostly New York) law firms and banks that stand behind sovereign bond issues—one potential way of thinking about Choi and Gulati's analysis—network effects may remain significant, but have far fewer welfare consequences than suggested below. *See infra* Part II.B. Further, the barriers to effective communication, and resulting coordination, that are identified below will also present far more limited obstacles to efficient contract transition.

[145] *Cf.* Kahan, *supra* note 110, at 586-87 (enumerating categories of variation in corporate bond contracts); Lemley & McGowan, *supra* note 98, at 571-72 (describing lesser importance of network effects in contracts consisting primarily of specific terms). Sovereign debt contracts might also be argued to contain relatively fewer specific, or non-open-ended, terms than corporate contracts.

[146] *Cf.* Lemley & McGowan, *supra* note 98, at 572-73; Ribstein & Kobayashi, *supra* note 98, at 112. Relatively less litigation of sovereign debt contracts may help to explain the smaller number of judicial decisions. *See* Lemley & McGowan, *supra* note 98, at 572-73. The more "domestic" nature of corporate

network effects may therefore be less important in sovereign debt contracts. Finally, given the sovereign character of one party to a sovereign debt contract, courts may hew more rigidly to contract language, again reducing the importance of any interpretive network effects.

On the whole, then, the present analysis cannot support strong conclusions regarding the significance of network effects in sovereign debt contracting.[147] Such conclusions must rest on empirical analysis and study.[148] However, the foregoing suggests good reasons to predict the presence of network value in sovereign debt contracts, including the importance of secondary trading in sovereign bonds and resulting marketing network effects, and the importance of legal counsel in sovereign debt contracting and resulting legal services network effects. Likewise, what empirical evidence we have indicates the presence of network effects.[149] Given as much, it is worth considering the compatibility of a network theory of sovereign debt contracting with the observed reality of longstanding stasis and rapid change in sovereign debt contracting, as described above. As we shall see, a network theory of sovereign debt contracting offers a compelling explanation of both patterns.

B. Network Effects, Stasis, and Change in Sovereign Debt Contracting

A network theory of sovereign debt contracting, and perhaps contract boilerplate more generally, offers a persuasive explanation of the observed pattern of development in the sovereign debt market in recent years. Network effects can first explain the stasis of market utilization of UACs, notwithstanding their seeming inefficiency and the substantial pressure to abandon their use. Yet, network effects can also explain the rapid shift to CACs in 2003, as well as the wholesale nature of that transition. These explanations will be considered in turn.

As articulated in an array of economic and legal analysis, network effects have the potential to produce Pareto inferior consumption patterns and welfare consequences. Among the efficiency concerns that have been identified in

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contracts and differences in repeat player characteristics may, in turn, help explain the diminished volume of litigation of sovereign debt contracts.

147 *See* Ribstein & Kobayashi, *supra* note 98, at 114-15.

148 To this effect, Steve Choi and Mitu Gulati have analyzed the existence of network effects in sovereign debt contracting and found evidence of their presence. *See* Choi & Gulati, *supra* note 5, at 931, 936, 938; *see also* Kahan & Klausner, *supra* note 39, at 740-60 (outlining empirical evidence of network effects in corporate bonds).

149 *See* Choi & Gulati, *supra* note 5, at 931, 936, 938.

network industries is the prospect of strong lock-in of existing technologies or standards.[150] As Klausner and Kahan have put it, "when network externalities are present . . . the outcome of decentralized individual maximizing decision in the market will be path dependent."[151] Thus, once a given network standard has secured a dominant or even exclusive position, it may be difficult to shake it from that position, no matter how inefficient it becomes.[152] This follows from the unwillingness of market participants to move to a smaller network, even given potential improvements in (inherent) product quality.[153] Network environments thus exhibit "excess inertia."[154]

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[150] *See* Di Noia, *supra* note 99, at 43 ("The model shows that network externalities may lock-in exchanges into inefficient outcomes, due to a lack of coordination, even in perfect competition."); Sean P. Gates, *Standards, Innovation, and Antitrust: Integrating Innovation Concerns into the Analysis of Collaborative Standard Setting*, 47 EMORY L.J. 583, 609-10 (1998); Klausner, *supra* note 39, at 791; *see also* Ahdieh, *Making Markets*, *supra* note 5, at 317-18. Other potential network inefficiencies have also been identified. *See* Lemley & McGowan, *supra* note 98, at 567; Ribstein & Kobayashi, *supra* note 98, at 110.

[151] Kahan & Klausner, *supra* note 100, at 763-64.

[152] *See* Nicholas Economides, *Network Economics with Application to Finance*, 2 FIN. MARKETS, INST. & INSTR., Dec. 1993, at 89, 93 ("Lock-in is particularly important in the presence of market power in sponsored networks. In general, firms may be very reluctant to change their way of operation, especially if they have to pay the costs of transition. The self-reinforcing nature of networks creates switching costs for the existing customers. The existence of positive critical mass often means that in the presence of one network, a differently organized one may not even exist. These facts give market power to firms that sponsor networks, and may impede technological innovation.").

[153] *See* Catherine Fazio & Scott Stern, *Innovation Incentives, Compatibility, and Expropriation as an Antitrust Remedy: The Legacy of the Borland/Ashton-Tate Consent Decree*, 68 ANTITRUST L.J. 45, 52 (2000) (discussing lock-in effects resulting "[w]hen marginal consumers weigh the network externality more heavily than the intrinsic value of each technology").

> [C]onsumers might have difficulty moving to a new standard—even if they all agreed that the adopted standard was suboptimal—because of collective action problems. The value of any alternative system would depend on the number of users adopting it; the rational consumer might well choose to wait until an alternative had been adopted by others who incurred the costs of shifting to the new standard but reaped fewer benefits relative to later adopters.

Lemley & McGowan, *supra* note 98, at 497 (citation omitted); *see also* Lewis M. Branscomb & Brian Kahin, *Standards Processes and Objectives for the National Information Infrastructure*, *in* STANDARDS POLICY FOR INFORMATION INFRASTRUCTURE 5-6 (Brian Kahin & Janet Abbate eds., 1995); Shelanski & Sidak, *supra* note 98, at 5 ("As the benefits offered by one network grow, so too do the costs to consumers of choosing, or switching to, a rival offering."). Pirrong argues that:

> Successful entry requires the new [network] to attract a sufficient number of traders from the incumbent *simultaneously*. If this does not occur, the new [network] is very costly to [operate] because it is illiquid . . . . Given the difficulty of coordinating the simultaneous defection of large numbers of traders, it is quite costly for an entrant [network] to survive, even if its terms and . . . policies [are preferable].

Stephen Craig Pirrong, *The Self-Regulation of Commodity Exchanges: The Case of Market Manipulation*, 38 J.L. & ECON. 141, 155 n.24 (1995).

In this path-dependent dynamic,[155] an early standard may determine the shape of the market long after it has grown inefficient.[156] A dominant technology may thus neither evolve with the dictates of efficiency nor be susceptible to displacement, given significant network effects. Such a pattern has been suggested to explain the continued dominance of the Microsoft Windows operating system, in spite of the asserted superiority of its competitors.[157] Slightly further afield, I have suggested that network lock-in may explain the persistent dominance of the New York Stock Exchange, notwithstanding its limited adoption of electronic enhancements of its trading

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Such network lock-in assumes a dispersed market, in which direct communication is not a viable mechanism for network participants to share a preference for transition. A small community of readily identifiable network participants might thus be able to transition effectively, by communicating among themselves an intention to elect a nondominant, but otherwise preferable, standard. Network barriers to transition are therefore limited—at least in the ordinary case—to those network markets in which size, dispersion, anonymity, and the like prevent effective communication. Thus, as noted above, if the network of sovereign debt contracting consists not of debtors and creditors, but of sovereign debtors' counsel and underwriters, network lock-in becomes easy to avoid, through direct communication among the latter groups. *See supra* note 144.

[154] *See* James B. Speta, *Handicapping the Race for the Last Mile?: A Critique of Open Access Rules for Broadband Platforms*, 17 YALE. J. ON REG. 39, 80 (2000) (describing potential "excess inertia" in network industries); *see also* Joseph Farrell & Garth Saloner, *Standardization, Compatibility, and Innovation*, 16 RAND J. ECON. 70, 71 (1985) (indicating that "it is plausible that the industry, once firmly bound together by the benefits of compatibility or standardization, will be inclined to move extremely reluctantly to a new and better standard because of the coordination problems involved"). *But see* Michael L. Katz & Carl Shapiro, *Product Introduction with Network Externalities*, J. INDUS. ECON., Mar. 1992, at 55, 73 (suggesting potential for "insufficient friction" in some network markets and resulting stranding of earlier purchasers).

[155] Note that network effects produce a different form of lock-in than "path dependence" as formally defined. Path dependence is grounded in historical patterns, while network lock-in is tied to the present composition of the market. *See* Lemley & McGowan, *supra* note 98, at 495.

[156] *See* Ahdieh, *Making Markets*, *supra* note 5, at 317-21. Of course, this does not mean that a new network can never displace an established first-mover. If the new standard is sufficiently advantageous, its inherent value might be able to overcome the network effects favoring the dominant standard. *See* Dwight R. Lee & Richard B. McKenzie, *A Case for Letting a Firm Take Advantage of "Locked-In" Customers*, 52 HASTINGS L.J. 795, 796-98 (2001) (noting that "if the gains from switching are greater than the costs of doing so, incentives exist for entrepreneurs—so-called 'network sponsors'—to overcome the built-in resistance to change"). In such circumstances, the new technology "leapfrogs" the established one. *See* Michael H. Knight & Nicholas A. Widnell, *Dark Clouds in the Distance? Network Effects and the Approaching B2B Storm*, 9 GEO. MASON L. REV. 599, 619 (2001) (describing how Sega gained substantial share from Nintendo through "leapfrog technology"); Lemley & McGowan, *supra* note 98, at 517; Melonie L. McKenzie, *How Should Competing Software Programs Marry? The Antitrust Ramifications of Private Standard-Setting Consortia in the Software Industry*, 52 SYRACUSE L. REV. 139, 155 (2002). In the presence of network effects, however, this result cannot be assumed, and requires not merely a somewhat more advanced, or cheaper, standard, but one offering significant improvements or cost-savings. *See* McKenzie, *supra*, at 155.

[157] *See* W. Brian Arthur, *Increasing Returns and the New World of Business*, 74 HARV. BUS. REV. 100, 102 (1996).

mechanism.[158] In these cases, competing technologies that cannot offer substantial efficiency gains have been unable to displace the network standard. The dominant players, meanwhile, have exhibited inadequate receptivity to technological upgrading or other forms of modernization.[159]

A pattern of network lock-in readily captures the state of sovereign debt contracting for much of the last century.[160] Notwithstanding apparent efficiency gains to be had by a shift to CACs,[161] most sovereign debt issuers were unwilling to choose the latter alternative.[162] Instead, bond issue after bond issue under New York law relied on the dominant network standard of unanimous action.[163] The lock-in of UACs should come as no surprise, however, if network effects are significant in the selection of sovereign debt restructuring terms.[164] Rather, lock-in of the UAC standard is precisely what a

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[158] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 222-23; Ahdieh, *Making Markets*, *supra* note 5, at 316-21.

[159] From a slightly different perspective, network lock-in can be conceived as a form of barrier to entry. In essence, new producers are excluded from the market, absent their identification of a substantially more efficient technology. Assessing network effects as such, I have previously suggested that new markets, standards, or technologies may not emerge in the first place, even absent any dominant producer. *See* Ahdieh, *Making Markets*, *supra* note 5, at 308–09; *see also* Ribstein & Kobayashi, *supra* note 98, at 110; Amitai Aviram, Regulation by Networks 13 (2003) (unpublished manuscript), *available at* http://www.law.uchicago.edu/Lawecon. In essence, the network-driven expectation that a dominant producer will emerge, *see infra* notes 174-77 and accompanying text, may cause producers not to enter, for fear they will be unable to recover their sunk costs if they do not ultimately emerge as the dominant network. *See* William J. Baumol et al., *Parity Pricing and Its Critics: A Necessary Condition for Efficiency in the Provision of Bottleneck Services to Competitors*, 14 YALE J. ON REG. 145, 160 (1997).

[160] *Cf.* Kahan, *supra* note 9, at 1078-79; Kahan, *supra* note 110, at 587 (describing lock-in of corporate bond contract terms). Other explanations have been offered for this pattern, including one by Lee Buchheit and Mitu Gulati. *See* Buchheit & Gulati, *supra* note 12, at 1359-60; *see also* Choi & Gulati, *supra* note 5, at 931. At a minimum, a network interpretation may supplement any alternative explanation, such as the possibility that the holdout concerns that CACs address were simply not a priority for market participants. *See* Roubini & Setser, *supra* note 14, at 19.

[161] *See supra* notes 8-13 and accompanying text.

[162] *See* Eichengreen, Crisis Resolution, *supra* note 54, at 10; EICHENGREEN ET AL., *supra* note 14, at 7 & tbl.1. It bears noting that scholars have flagged reservations about CACs. *See* Portes, *supra* note 16, at 48, 67, 69; *see also* Bratton & Gulati, *supra* note 7 (citing sources); Buchheit & Gulati, *supra* note 12, at 1358 n.88; Gulati & Skeel, *supra* note 4, at 1.

[163] As a further sovereign debt contract puzzle, Choi and Gulati cite the failure of recent sovereign debt contracts to resolve the ambiguity of the *pari passu* clause, notwithstanding the attention called to this obscure provision by Elliott Associates' predatory claim again Peru's assets. *See* Choi & Gulati, *supra* note 5, at 987-90. Strong network lock-in can readily explain this pattern. In essence, sovereign debtors might fear that any shift from existing contract norms—even toward seemingly greater clarity—would reduce the marketability of their bonds. More difficult to explain from a network perspective, thus, is the increase in the percentage requirement for amendment of the *pari passu* clause in several of the recent sovereign bond contracts. *See id.*

[164] Besides explaining lock-in of the UAC standard, network effects may also help to explain the widespread usage of UACs. This is simply the flip side of the same coin. By preventing displacement of the existing standard, network effects favor continued, and increasingly universalized, use of that standard.

network theory of sovereign debt contracting would predict. Given the pattern of dispersed ownership of sovereign bonds by anonymous holders, communication among creditors and debtors of an intent to transition to CACs was essentially impossible.[165] Without such communication, however, no party to a sovereign debt contract would be willing to shift away from the dominant network of UACs, even to the superior, but non-network, CAC standard. Favoring this characterization, Barry Eichengreen, Kenneth Kletzer, and Ashoka Mody offer an explanation of UACs' persistence that overlaps with a network analysis, describing the pattern as one of inertia.[166]

Admittedly, the extent of network lock-in of UACs was likely reduced by the presence of the competing MAC network under English law.[167] Thus, a shift from the network dominant UAC standard to CACs did not require adoption of a completely new and untested standard. Rather, MACs were included in a significant portion of the universe of sovereign bonds.[168] While the extent of network value would therefore be diminished by a shift to collective action, it would not be completely lost. First-movers to CACs would not be starting a new network, but would rather be joining a smaller, but still significant, MAC network under English law. The presence of such a competing network, even if smaller, might be expected to diminish the extent of network lock-in.[169]

On the other hand, it is not entirely clear that the New York law UAC and the English law MAC networks represented true competitors for the business of emerging markets for several reasons. Until the recent transition, developing countries issued predominantly UAC bonds under New York law.[170] Eichengreen, Kletzer, and Mody have grounded this pattern in those nations' relatively greater need to exhibit the "commitment" implicit in UACs, than to maintain the "flexibility" facilitated by CACs.[171] Emerging market issuers may therefore have faced less of a choice of networks (i.e., New York law UACs versus English law MACs) than the existence and even size of the minority MAC network might nominally suggest.

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165 *See supra* notes 50-53 and accompanying text.

166 *See* EICHENGREEN ET AL., *supra* note 14, at 17, 33-36; Eichengreen, *supra* note 16, at 86-87.

167 *See supra* Part I.A.

168 *See* Mody, *supra* note 17, at 14, tbl.1.

169 The seeming ease of the ultimate transition to CACs might thus be explained, at least in part, by the presence of the CAC-style English law network of MAC bond contracts.

170 *See* Mody, *supra* note 17, at 14.

171 *See, e.g., id.* at 13-14.

Sovereign debt contracts, furthermore, consist of more than an election of unanimous versus collective action provisions. Bond contracts encompass an array of provisions, largely standardized within the New York and the English debt markets, but distinct as between the two jurisdictions.[172] The body of New York versus English law case precedent is also a point of distinction in a sovereign's choice to issue under New York or English law. For these reasons, the choice to shift to English law MACs would have involved substantially more than a choice between competing networks distinguished only by their use of UACs instead of MACs. Rather, other network—as well as inherent—utility might be sacrificed by such a shift. Network lock-in may have remained significant for this reason as well.

A final network-related source of lock-in for emerging markets, which might further obviate the nominal availability of the competing network of English law MACs, turns on the signaling effect of such a shift.[173] Thus, regardless of its rationale, the decision of a given emerging market, which has ordinarily issued its debt with UACs, to make a unitary shift to MACs might have been interpreted by the market to suggest nonpublic information regarding the stability or creditworthiness of the issuer. For these reasons, network lock-in of UACs likely remained significant in the sovereign debt markets, notwithstanding the presence of English law MACs.

If a network conception of sovereign debt contracting offers a compelling theory of the long persistence of UACs, notwithstanding widespread challenges to their efficiency, what of UACs' ultimate demise in the rapid and wholesale transition to CACs over the course of 2003? Notably, network effects also explain this pattern with relative ease. The network effects literature predicts market "tipping" in the presence of strong network effects.[174] As described above, in network environments, consumers prefer to participate

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172 *Cf.* Choi & Gulati, *supra* note 5, at 932.

173 *See* ERIC A. POSNER, LAW AND SOCIAL NORMS 18-19 (2000). One among many potential non-network explanations for lock-in of the UAC standard is the strong reliance on form or model terms in drafting bond contracts. Mitu Gulati and Ralph Brubaker have separately opined to the author that this tendency may be especially strong in sovereign debt and other public finance groups at large law firms. *See also supra* note 39 and accompanying text.

174 *See* Shelanski & Sidak, *supra* note 98, at 5; *see also* Ahdieh, *Law's Signal*, *supra* note 5, at 226-27; Ahdieh, *Making Markets*, *supra* note 5, at 305 n.114 (characterizing network markets as "tippy," such that "the coexistence of incompatible products may be unstable, with a single winning standard dominating the market") (quoting Stanley L. Besen & Joseph Farrell, *Choosing How to Compete: Strategies and Tactics in Standardization*, J. ECON. PERSP., Spring 1994, at 117, 118); Michael L. Katz & Carl Shapiro, *Systems Competition and Network Effects*, J. ECON. PERSP., Spring 1994, at 93, 105–06; Lemley & McGowan, *supra* note 98, at 496–97; *cf.* Bratton & Gulati, *supra* note 7 (noting potential for tipping from UACs to CACs).

in what is or will be the largest network. This preference arises from the "positive externality conferred upon users of a term . . . that [is and] will be widely used."[175] A larger network, in essence, offers greater network utility to its participants. Because of this preference to participate in the largest network, however, network industries can be expected to move rapidly toward—and tip to—a dominant, if not singular, network, as each new participant, hoping to maximize its own network gains, jumps on the prevailing network's bandwagon.[176]

A pattern of network tipping can readily explain the rapid shift from UACs to CACs in 2003. In essence, as various signals suggested a likely shift to CACs, and as a handful of countries took the plunge, the market tipped to CACs. As each sovereign bond issuer made the decision to restructure existing debt or issue new debt, it identified some widely recognized, or idiosyncratic, reason to expect that future contract norms would favor CACs. It therefore chose to adopt collective action terms itself, to avoid being stranded with the non-network-dominant choice of term—UACs. Assuming significant network effects, moreover, the speed of this process should not be surprising. To the contrary, once the process is underway, network theory would predict it to be both rapid and wholesale, as each and every new issuer rationally adopts the new standard. That CACs have emerged as the new norm, and not simply a competing alternative to UACs, falls well within the expectations of network theory.[177]

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[175] Kahan & Klausner, *supra* note 100, at 729.

[176] *See* Katz & Shapiro, *supra* note 174, at 105–06 (explaining "tipping" as the tendency of one system to pull away from its rivals in popularity once it has gained an initial edge).

[177] It bears noting that Klausner and Kahan's "learning benefits," *see supra* note 100, have the potential to reduce a tipping effect tendency toward transition. *See* Klausner, *supra* note 39, at 789 n.102 (noting that learning benefits encourage lock-in). By contrast with network effects, future gains that result from the number of present and future users of a given good, standard, or term, learning benefits are products of the past user base of a given good, standard, or term. Thus, unlike the future judicial decisions that produce interpretive network effects, the learning benefits encompassed in the existing universe of judicial precedent regarding a given term will persist, even if all users were now to abandon that term. Learning benefits thus favor retention of an existing standard, regardless of its existing pool of users, so as not to sacrifice the benefits of past learning. *See id.*

For any given user, it is entirely plausible that the learning benefits of the historic standard may outweigh the network benefits of joining a larger, but newer network. Over time, this should be increasingly less true, but at least at the outset, learning benefits may outweigh network effects. Ultimately, this will depend on the balance of inherent value (including learning benefits) and network value in a given good. *See supra* notes 99-104 and accompanying text. In the battle between the Betamax and VHS standard for videocassette players, for example, the Betamax standard's inherent benefits, including its existing base of players and programs, would seem to have been inadequate to prevent a relatively rapid tipping of the market to VHS. The growing network favoring the DVD standard, by contrast, would seem to be insufficiently strong

A network theory of sovereign debt contracting can therefore help to explain much of what we have observed in the sovereign debt markets over the last several years. Perhaps more importantly, such a theory discourages any rote assumption that contract standards will naturally evolve in the face of efficiency demands. Yet, a major gap remains in our understanding of the pattern of recent developments in sovereign debt markets. Network theory may explain why there was little change in sovereign debt restructuring terms for many years, and why the change was both rapid and wholesale when it came. But network analysis alone cannot explain why the change occurred when it did. More specifically, it does not address what might trigger the shift from network stasis to network transition. In the following Part, I suggest a role for state action in that shift.

III. COORDINATION GAMES, FOCAL POINTS, AND A CUEING THEORY OF SOVEREIGN DEBT TRANSITION

If a network theory of sovereign debt contracts can explain both the long persistence of UACs and the alacrity with which they were abandoned, how might we explain the timing of that shift? After decades of seeming resilience, why were UACs replaced by CACs at the moment they were? While external pressure in 2002 and 2003 might offer a partial explanation, it cannot alone suffice. Pressure to shift to CACs had been in place since the 1990s, yet did not make a dent in the widespread use of UACs. Something more must have been added to the mix.

Applying a relatively unfamiliar corner of game theory to the network dynamic of sovereign debt contracting, this Article posits that the driving force behind the recent shift to CACs was a change in expectations, brought about through what I term "regulatory cues." The following begins with an explication of a "coordination game" theory of sovereign debt contracting and the identification of regulatory cues as a critical mode of state action in facilitating coordination around alternative equilibria. I then identify potential cues in the transition from UACs to CACs and use these examples to explore the nature of regulatory cues in contract transition. In sum, the transition from UACs to CACs in sovereign debt contracts suggests the role of regulatory cues as an important, if inadequately appreciated, mechanism of state action.

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to overcome the inherent benefits of the now-longstanding VHS network. In sovereign debt contract terms, for the reasons outlined above, I would predict network effects to be of reasonable significance. Choi and Gulati's empirical analysis would seem to lend some support to this view. *See* Choi and Gulati, *supra* note 5.

A. A Game Theoretic Account of Sovereign Debt Contracting

While game theory has found widespread application in the literature of sovereign debt restructuring, the latter analysis has relied almost exclusively on the familiar paradigm of the Prisoner's Dilemma. Given an orientation to the challenge of debt restructuring under unanimous action provisions, the strategic dynamic of the Prisoner's Dilemma is an appropriate frame of reference. This strategic pattern arises in sovereign debt restructuring from the incentive of each creditor to demand side payments for their participation in any collective decision to restructure. In this way, each creditor attempts to maximize its individual payoff.[178] This is the precise pattern of the Prisoner's Dilemma, in which each prisoner's individual payoff favors defection —confession, or a refusal to participate in any agreed restructuring. Yet the resulting outcome, in which both players defect, produces inferior payoffs for both players than if they had kept to the agreement.[179] Coordination is therefore at the heart of the Prisoner's Dilemma of sovereign debt restructuring under UACs.

Yet the Prisoner's Dilemma actually involves a form of second-order coordination, *within* the game of sovereign debt restructuring. With the terms of the game defined by unanimous action contract provisions, the Prisoner's Dilemma necessarily plays itself out. In the present analysis, however, our subject is the first-order coordination required to define the rules, or standards, of the relevant game.[180] As with the restructuring of distressed foreign debt, such coordination is not easy to achieve. The strategic dynamic at work, however, is not characterized by the Prisoner's Dilemma game, but by the less familiar, yet no less prevalent, "coordination game" dynamic.[181]

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[178] Buchheit & Gulati describe a slightly broader coordination dilemma than the conventional account, but continue to focus on coordinated action among creditors; thus, they emphasize the prospect of acceleration or litigation by holdout creditors, and consequently arrive at an iteration of the familiar Prisoner's Dilemma. *See* Buchheit & Gulati, *supra* note 12, at 1320. A distinct inquiry regarding application of the Prisoner's Dilemma in sovereign debt restructuring suggests that the strategic dynamic at work in sovereign debt markets may not be nearly as dire as the conventional analysis would suggest. *See* Arturo C. Porzecanski, *The Constructive Role of Private Creditors*, ETHICS & INT'L AFF., Fall 2003, at 18, 19.

[179] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 229-30.

[180] *See* Charles J. Goetz & Robert F. Scott, *The Limits of Expanded Choice: An Analysis of the Interactions Between Express and Implied Contract Terms*, 73 CAL. L. REV. 261, 292-93 (1985) (highlighting need for coordination in facilitating change in contract norms). In slightly different terms, one might think of most game theory analysis in the sovereign debt literature to be about resolving sovereign debt crises, while the present analysis considers how to avoid them.

[181] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 234. Coordination games have not received much attention among legal scholars. *See* Steven Hetcher, *Creating Safe Social Norms in a Dangerous World*, 73 S. CAL. L. REV. 1, 7, 42 n.160 (1999). While various explanations for such neglect might be suggested, one possibility is

Coordination games involve the same challenge found in the network context of the transition from UACs to CACs and analogous standard-setting contexts: the need to coordinate and align player expectations.[182] This need is readily apparent in the most basic model of coordination—the Meeting Place game—in which a husband and wife who have become separated seek to find each other.[183] In this situation, aligned interests and a resulting preference for coordination—the hallmarks of network environments, in which market participants gain from selection of a common network standard—are the dominant features.[184] In graphical terms, with the added feature of one potential equilibrium that is Pareto superior to the other, this dynamic is captured in Figure 1.

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the erroneous assumption that where interests are aligned, as in coordination games, efficient outcomes will occur without legal intervention. *See id.* at 47 & n.47 (citing examples). A related argument posits that true coordination game social dynamics are rare, as compared with Prisoner's Dilemma-type social interactions. To the contrary, however, "[e]veryday life is full of situations where we have to coordinate our actions with those of other people." *See* Karl Warneryd, *Conventions and Transaction Costs*, *in* 1 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 460 (Peter Newman ed., 1998). Coordination games capture many of the most fundamental forms of human interaction. Experimental evidence would appear to support the view that coordination failures are more than a "theoretical curiosity." *See* RUSSELL W. COOPER, COORDINATION GAMES: COMPLEMENTARITIES AND MACROECONOMICS 1 (1999).

[182] *See* Richard H. McAdams, *A Focal Point Theory of Expressive Law*, 86 VA. L. REV. 1649, 1679, 1680 (2000) (describing the capacity of a judge to achieve an outcome merely by altering the parties' expectations).

[183] In Thomas Schelling's original Meeting Place game, a husband and wife were to determine where and when they would attempt to find each other if they were separated at a department store. *See id.* at 1656 (describing Schelling's original game). In simplest terms, this can be modeled as such:

		Husband: Entrance	Husband: Information Desk
Wife	Entrance	5,5	0,0
	Information Desk	0,0	5,5

Schelling also conducted other "matching game" experiments. *See* Robert Sugden, *A Theory of Focal Points*, 105 ECON. J. 533, 543 (1995) (noting "Schelling's New York game, Choose a Disc, Choose a Letter, and Coloured Disks"). For more examples of coordination games, see McAdams, *supra* note 182, at 1654–58.

[184] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 233-37. In coordination games such as the Meeting Place game, interests and incentives are aligned, but the players lack the necessary information—specifically, accurate expectations of one another—to "find each other" and solve the game.

FIGURE 1

Sovereign Debt Contracting as a Meeting Place Coordination Game[185]

		Brazil	
		CACs	UACs
Mexico	CACs	10,10	0,0
	UACs	0,0	5,5

This game, like coordination games generally, is characterized by multiple Nash equilibria—here, in the northwest and southeast quadrants.[186] At these points, players cannot enhance their welfare by a unilateral change in strategy.[187] Nash equilibria are consequently quite stable. Neither party can be expected to diverge from them, absent some expectation that their counterpart will do likewise. Even if players are at the suboptimal coordination point of the southeast quadrant, thus, they may not move to the Pareto superior northwest one.[188]

If the northwest quadrant is the Pareto optimal coordination norm of CACs and the southeast represents the longstanding use of UACs, then, what might produce a shift from the latter to the former? At heart, the shift among Nash equilibria is an issue of expectations.[189] If they are to move among Nash equilibria, market participants need some mechanism by which they can develop accurate expectations of the future behavior of other market participants, and make resulting adjustments to their own behavior. In the

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[185] I demarcate the game participants as Mexico and Brazil. In its broader form, however, the game of sovereign debt contracting I describe herein includes the entire array of sovereign debtors, as well as the universe of institutional and individual lenders. As such, iterations of the same game would be expected to play out between Mexico and the United States, between Mexico and any given lender, between Mexico and the IMF, between the IMF and other lenders, between the IMF and the United States, and so on.

[186] Notably, Bratton and Gulati also identify a multiple equilibrium issue in sovereign debt contracting, but one directed to the prospect of defection underlying the Prisoner's Dilemma. *See* Bratton & Gulati, *supra* note 7.

[187] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 232, 235-36.

[188] *See id.* at 236-37.

[189] *See id.* at 230-33; Ahdieh, *Making Markets*, *supra* note 5, at 308-10.

simple terms of the Meeting Place game, I need to develop accurate expectations of where you are likely to expect me, to expect you to go, and so on.[190] Once such expectations are developed, one can predict a common shift to the Pareto superior choice—here, CACs.

How do such expectations develop, then? How might the array of participants in a stable coordination game develop the common set of expectations necessary to trigger abandonment of the existing (Pareto inferior) Nash equilibrium, for a more efficient alternative? Most obviously, they might communicate with one another. In sovereign debt contracting, for example, a creditor conference might be convened, market analysis of competing contract terms might be developed and widely circulated, or debtors might organize themselves into political groupings. In a variety of circumstances, however, communication may not be an available, or effective, source of common expectations.[191]

To begin with, the greater the heterogeneity of participants in the relevant game, the less effective communication is likely to be. Heterogeneous parties are less likely to come together, or to be able to reach common understandings, if they do. In sovereign debt contracting, the relevant community consists, most significantly, of competing populations of creditors and debtors.[192] Even within these groups, the extent of heterogeneity is substantial, with debtors ranging from the United States to the least-developed countries, and creditors ranging from banks and other institutional holders of sovereign debt to individual bondholders.[193]

Moreover, the efficacy of communication in sovereign debt contracting is likely to be further diminished by the number of relevant participants. This follows from the shift from syndicated bank loans to bonds, as described above.[194] With this shift, the community of sovereign debt creditors went from a small collection of large banks, who could easily come together or otherwise consult, to a massive number of dispersed and anonymous bondholders, among whom communication is all but impossible. As noted above, this obstacle is further aggravated by the tradability of bonds on the secondary markets.

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190 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 236 n.94.

191 *See id.* at 239-41.

192 *But see supra* note 144.

193 Among the relevant creditors, moreover, are so-called "vulture funds," which purchase bonds of distressed sovereigns with the specific intent to hold out from any agreed restructuring. A greater heterogeneity of interests among coordination game participants is difficult to imagine.

194 *See supra* notes 47-50 and accompanying text.

Consequently, the universe of participants in the coordination game of sovereign debt contract transition is in near constant flux.

But the tradability of sovereign bonds is actually even more problematic for coordinating expectations than this suggests. Given the relatively extended term of sovereign bonds and their tradability on the secondary markets, the network of sovereign debt lenders actually has an even broader character than the present pool of bondholders. Instead, it encompasses the universe of potential purchasers of such bonds.[195] Among this broad group, it is even clearer that communication cannot be relied on to achieve efficient coordination.

Lastly, cheap talk—the devaluation of nonbinding speech—may also limit the efficacy of communication as a means of creating common expectations and thereby facilitating the shift to a Pareto superior coordination point.[196] In sovereign debt contracting, this may be an especially acute difficulty, given the need for effective communication among debtors and creditors. Even given the existence of some significant coordination dynamic, driving both parties to the relevant communication to seek convergence on a common standard, the strategic interaction of debtors and creditors must necessarily also involve some strong divergence of interest. Given as much, distortive cheap talk is likely to be unavoidable.[197]

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[195] *Cf.* Ahdieh, *Making* Markets, *supra* note 5, at 291.

[196] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 239-41.

[197] *See id.* at 240-41. For this reason, something akin to a "Battle of the Sexes" coordination game is likely most appropriate to the sovereign debt contracting strategic environment.

		Husband	
		Ballet	Boxing Match
Wife	Ballet	10,5	3,3
	Boxing Match	-3,-3	5,10

In this conflictual coordination game, wife and husband wish to spend the evening together (hence, the need for coordination), but have distinct preferences as to where to go—a boxing match or the ballet (hence, the element of conflict). *See id.* at 240 n.102.

In the face of this dilemma, in which coordination is desirable, but communication is difficult or impossible, Thomas Schelling famously offered "focal points" as a mechanism by which coordination games might be solved. In Schelling's approach, focal points are those equilibrium choices in coordination games "that, for cultural or psychological reasons, [are] more 'salient' and therefore seem[] more natural."[198] A focal point analysis thus asks whether a particular solution stands out or is more prominent[199] and suggests that such solutions can be expected to be chosen by any given coordination game player and, therefore, to be the preferred choice of players collectively.[200]

While useful as an explanation of players' preliminary choice of one Nash equilibrium over another, however, Schelling's analysis cannot alone resolve dilemma of transition. Where the parties have already arrived at a given equilibrium, thus, a focal point theory cannot explain subsequent transition. The most focal point in a coordination game already played is thus the equilibrium at which the players have arrived, whether it be efficient or otherwise.

For focal points to facilitate a shift among Nash equilibria, then, what is needed is some mechanism to render an alternative solution focal. While various agents might contribute to this end,[201] I would propose that there is an important public, or official, role to play in this function, by means of what I have previously termed "regulatory cues."[202] Such cues are a form of state

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198 David A. Strauss, *Common Law Constitutional Interpretation*, 63 U. CHI. L. REV. 877, 910 (1996). On focal points generally, see Ahdieh, *Law's Signal*, *supra* note 5, at 129-30, and McAdams, *supra* note 182, at 1659-63.

199 *See* DOUGLAS G. BAIRD ET AL., GAME THEORY AND THE LAW 39 (1994); ROBERT SUGDEN, THE ECONOMICS OF RIGHTS, CO-OPERATION AND WELFARE 49 (1986); EDNA ULLMANN-MARGALIT, THE EMERGENCE OF NORMS 83-84 (1977); McAdams, *supra* note 182, at 1659. The term "salience" is commonly used in the coordination game literature as an alternative characterization of focal points. *See* Gerald J. Postema, *Conventions at the Foundation of Law*, *in* 1 DICTIONARY OF ECONOMICS AND THE LAW, *supra* note 181, at 469-70 (describing the regularity of behavior as a source of salience because it makes "one particular combination of actions stand out as uniquely eligible among a number of possible combinations"); *see also* SUGDEN, *supra*, at 89-90 (noting the interchangeable terminology of prominence, salience, and focal points).

200 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 244-45.

201 Private sources of focal points can thus be identified. Schelling refers to a picture of the Empire State Building on the cover of *The New York Times* as a privately created focal point, which might help solve his New York game, in which two friends become separated in New York City without having previously identified a meeting place. Choi and Gulati's emphasis on the role of the law firm of Cleary, Gottlieb, Steen & Hamilton, which serves as counsel to a substantial number of sovereign debt issuers, in facilitating the transition to new terms might also be characterized to constitute a privately created focal point. *See* Choi & Gulati, *supra* note 5, at 950 tbl.2, 972, 974.

202 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 245-47.

action, but are not mandates in any conventional regulatory sense.[203] They involve no threat of sanction, or even the existence of such sanction.[204] The role of regulatory cues in the coordination game dynamic of network industries, including contract transition, is to help shape expectations in a way that permits efficient private transition.[205] Coercion—whether in the form of threatened sanction or promised reward—is unnecessary for this adjustment of expectations (rather than incentives), the key to the efficient resolution of coordination games.[206]

Thus, regulatory cues play an informational, a facilitative, and an encouragement role, not a coercive one. In a variety of forms, regulatory cues encourage the emergence of common expectations around a particular equilibrium outcome, thereby facilitating coordination around that equilibrium and resolution of the relevant coordination game.[207] In the terms of the coordination game of sovereign debt contracting, regulatory cues might serve to make alternative contract terms focal and thus facilitate transition to the Pareto superior coordination equilibria of CACs.

Notably, such an intermediate public role in sovereign debt contracting is not without precedent. In fact, just this pattern is evident in the English and U.S. governments' role in organizing dispersed foreign bondholders during the interwar period. In England, Parliament granted the Corporation of Foreign Bondholders a royal charter, while in the United States, the Foreign Bondholders Protective Council arose out of a working party sponsored in 1932-33 by the State Department.[208] In each case, coordination among creditors was facilitated through indirect state action. Today, as in the 1930s, changes in sovereign debt contract norms may again "require moral suasion by

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203 *See id.* at 255-59.

204 *See id.*

205 *See id.* at 229-33; Ahdieh, *Making Markets*, *supra* note 5, at 308-09.

206 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 229-33. It is important to note, in this view, that the "coercive" nature of conventional regulation can come in two guises. Whether carrot or stick, reward or punishment, these are perfect substitutes for one another. In some sense, then, government "persuasion" is no different from government "mandate." In each case, the incentives of the regulated entity are altered by public action.

207 In an earlier article, I describe the nature and function of such cues in extended detail. *See id.* at 245-68. Arguably, the debt restructuring strategy of the Brady Plan exhibited some cueing dimensionc in its pressure on developing countries to make the shift to Brady Bonds. *See* Eichengreen & Portes, *supra* note 48, at 15-16.

208 *See* Portes, *supra* note 16, at 59-60. The SEC also played a role in the evolution of the Foreign Bondholders Protective Council in the United States. *See id.* at 60.

G-7 governments, central banks, and the IMF to overcome the markets' reluctance" to change.[209]

B. Regulatory Cues in Sovereign Debt Contract Transition

In the recent transition from UACs to CACs in sovereign debt contracts, several important regulatory cues can be identified. Each of these likely helped to influence both debtor and creditor expectations of a shift to CACs; collectively, they helped to tip the market to the latter. By rendering the use of CACs as focal, such cues helped to break the lock-in of the Pareto inferior Nash equilibrium of UACs, in the southeast quadrant, and facilitate a shift to the Pareto superior Nash equilibrium of CACs, in the northwest quadrant.[210] The range of relevant cues can be divided into two broad categories, based on the relevant actor. The first set encompasses the range of regulatory cues offered by the United States and other developed economies, the official sector (e.g., the IMF and the World Bank), and international groupings of these actors. The second includes those cues offered by emerging market sovereign debtors. Both categories of regulatory cues, furthermore, can be graded along a pair of independent axes, which I define in the following section as the extent to which the relevant cue has a coercive potentiality beyond its cueing function, and the extent to which its coordinative role arises from its provision of information.

1. Regulatory Cues of Creditor States and the Official Sector

In the first category, perhaps the most significant regulatory cue was the U.S. Department of Treasury's strong encouragement of a shift to CACs.[211] Before 2003, "[t]he U.S. Treasury and leading investment bankers [had] been searching for at least one reputable emerging-market sovereign willing to volunteer to issue a benchmark bond with new collective-action clauses facilitating an eventual restructuring."[212] Roubini and Setser have implicitly

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[209] *Id.* at 65.

[210] *See supra* notes 184-88 and accompanying text.

[211] *See* Choi & Gulati, *supra* note 5, at 970; *Dealing with Default*, *supra* note 81; Porzecanski, *supra* note 178, at 24. Although there is no evidence of it to date, pressure on investment banks could also serve a cueing role in contract transition. *See* Roubini & Setser, *supra* note 14, at 23 ("A handful of investment banks dominate the emerging market bond business. These investment banks could be summoned by the Treasury and the Federal Reserve and it could be made clear that the authorities expect them to follow the lead of [those banks that are using CACs] and to bring to market a new generation of bonds that have clauses. If not, the authorities would 'name and shame' the investment banks that refuse to cooperate.").

[212] Porzecanski, *supra* note 15, at 41. Similarly, Under Secretary of Treasury John Taylor suggested the

suggested the value of such encouragement by the United States and other developed countries in facilitating sovereign debt contract transition.[213] Of course, such strong encouragement—or mild pressure, as it might be seen in the eyes of the beholder—may have contributed to the shift to CACs as much, if not more, because of its coercive force, as its cueing function. As I describe below, these functions are not exclusive of one another.[214] Rather, a given public act may both coerce and cue transition. For present purposes, however, I focus particularly on the cueing function of such pressure.

The cueing function of U.S. encouragement of a shift to CACs is readily apparent in the case of Mexico, which became the first investment-grade issuer of New York law bonds to include CACs, under pressure from the United States.[215] Notably, Mexico announced its issue—unexpected given earlier indications that it had no plans for a new issuance[216]—immediately before the April 2003 IMF meeting at which the final SDRM proposal was to be presented for approval.[217] In doing so, it effectively cut the legs out from under the SDRM, as the United States had long sought to do.[218] Mexico has seemed to acknowledge the external role in its decision.[219] As put by one Mexican finance official: "This is more about sending a signal to the international markets than it is about reducing our borrowing costs."[220] The immediate praise of Mexico by the United States and the G-7 may also be suggestive: "As a solid investment-grade borrower, Mexico is making an important contribution to strengthening the international financial system."[221]

U.S. expectation that new European Union members would soon adopt CACs. *See* Taylor, Using Clauses, *supra* note 15.

213 *See* Roubini & Setser, *supra* note 14, at 23 ("Issuers that continue to use the old boilerplate should at a minimum expect that their unwillingness to use collective action clauses will be publicly noted in the course of IMF surveillance and that they will have unpleasant conversations with U.S. authorities.").

214 *See infra* note 264-65 and accompanying text.

215 *See* Skeel, *supra* note 25, at 418 n.3.

216 *See Mexico Pioneers Plan to Ease Debt*, *supra* note 1.

217 *See* Gulati & Skeel, *supra* note 4, at 3.

218 *See* Taylor, Using Clauses, *supra* note 15.

219 *See* Eichengreen, *supra* note 16, at 87 n.6.

220 *Mexico Pioneers Plan to Ease Debt*, *supra* note 1.

221 *Id.* I elaborate *infra* why this pattern is not best understood as U.S. coercion of Mexico. *See infra* Part III.C.1. Such coercion might encompass both the possibility I emphasize herein—what might be characterized as the "negative coercion" of threatened sanctions—and the "positive coercion" of promised rewards. In either case, Mexico's strategy is altered based on changed incentives, as opposed to expectations. A cueing theory, however, emphasizes the role of U.S. action in shaping Mexican expectations. *See infra* Part III.C.1.

A related regulatory cue was the decision of many developed economies to incorporate CACs into their own debt instruments.[222] Such "leadership by example" was actively encouraged by the IMF and others.[223] Responding to this encouragement, in September 2002, the membership of the European Union, including Italy, Spain, and Sweden, which regularly issue debt in foreign jurisdictions, announced plans to incorporate CACs into their bond contracts.[224] Canada and Switzerland followed suit.[225] Collectively, these choices encouraged an expectation that generalized transition might be imminent.[226]

The clearly articulated goal of the G-7 to minimize IMF bailouts was another important cue behind the shift to CACs. Beginning with a proposal from the Council on Foreign Relations in 1999, scholars and policymakers increasingly insisted that the IMF should hew more closely to the constraints of its bylaws on the provision of bailout funds.[227] In the period immediately preceding the shift to CACs, several countries, as well as the official sector, began to sound an even more forceful note on this issue. John Taylor, the U.S. Under Secretary of Treasury, offered the clearest example of this pattern in an April 2002 address regarding CACs and the SDRM initiative.[228]

This was far from cheap talk, meanwhile, given the actual limitation of official sector relief in the recent cases of Argentina, Ukraine, and Ecuador.[229]

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222 *See* Boorman, *supra* note 15, at 67.

223 *See* Portes, *supra* note 16, at 47 (quoting 1999 IMF Report); *see also* Eichengreen, Crisis Resolution, *supra* note 54, at 15; Taylor, Using Clauses, *supra* note 15.

224 *See* Taylor, Using Clauses, *supra* note 15.

225 *See* EICHENGREEN ET AL., *supra* note 14, at 9; Eichengreen, *supra* note 16, at 87; Portes, *supra* note 16, at 70.

226 The nature of any cueing effect of the developed countries' choice of CACs warrants careful definition. Such shifts do not serve, at least in primary part, to facilitate transition by enhancing the returns on the now-larger CAC network. Given the miniscule possibility that Canada, Switzerland, Italy, or Sweden will ever seek to restructure their debt, it is not obvious that they can be meaningfully included in the CAC network encompassing Mexico, Brazil, and Uruguay. Admittedly, the use of CACs by Canada, Switzerland, Italy, and Sweden may enhance awareness and improve the pricing of CACs, indirectly enhancing value. *See supra* Part II.A. Yet this is not the primary cueing function of that choice. Rather, developed countries' use of CACs acts as a cue for any given emerging market because they signal a greater likelihood that other emerging markets will follow the lead of Canada, Switzerland, and the others, and also adopt CACs.

227 *See* EICHENGREEN ET AL., *supra* note 14, at 8. In addition to the Council on Foreign Relations, the Bank of Canada and the Bank of England jointly proposed as much, as did the Meltzer Commission. *See id.*

228 *See* Taylor, Sovereign Debt Restructuring, *supra* note 15; *see also* Barry Eichengreen, *Crisis Prevention and Management: Any New Lessons from Argentina and Turkey?*, GLOBAL DEV. FIN., Oct. 2001, at 20-21; Porzecanski, *supra* note 15, at 40; Porzecanski, *supra* note 178, at 24.

229 *See* Bratton & Gulati, *supra* note 7; Eichengreen, *supra* note 228, at 21-22, 22 n.42; *cf.* EICHENGREEN ET AL., *supra* note 14, at 8.

Even more important for the adjustment of market expectations regarding the use of CACs was the willingness of the international community to allow several nations to fall into default, notwithstanding longstanding talk of the risks of "contagion."[230] This included Russia in 1998,[231] Ecuador in 1999, and Argentina, arguably, in 2002.[232]

Following directly from the latter set of regulatory cues, the IMF's serious consideration of an SDRM—which suggested its growing reticence to pay a hundred cents on the dollar in emerging market bailouts[233]—and even more so, the actual prospect that an SDRM might come into being, were important cues for the transition from UACs to CACs. "Why have borrowers changed their minds? One reason is fear. Once the SDRM was mooted—a far worse idea than collective-action clauses in borrowers' eyes—the thought that it might be put into effect focused minds on the search for a market-based alternative."[234]

Yet IMF interest in an SDRM might not have been enough to alter longstanding expectations. The United States's apparent wavering on the SDRM, however, greatly strengthened the force of the SDRM cue to the markets.[235] "The [U.S.] Treasury, apparently annoyed by bondholders' failure to embrace its contractarian accommodation of their interests, responded with a public tilt in the direction of the IMF proposal."[236] If this was the United States's gambit, it was an effective cue. In the aftermath of the U.S. expression of interest in the SDRM, the Institute of International Finance, representative of the interests of sovereign debt creditors and long opposed to the adoption of CACs, suddenly embraced them. Other creditor groups also came to identify CACs as an alternative approach and even proposed boilerplate language for such clauses.[237]

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230 *See* Frank Partnoy, *Why Markets Crash and What Law Can Do About It*, 61 U. PITT. L. REV. 741, 753 (2000).

231 *See* Eichengreen, *supra* note 16, at 80 n.3.

232 *See* Bratton & Gulati, *supra* note 7; Eichengreen, *supra* note 228, at 21-22, 22 n.42; Portes, *supra* note 16, at 70-71; Porzecanski, *supra* note 15, at 42.

233 *See* Eichengreen, Crisis Resolution, *supra* note 54, at 12.

234 *Dealing with Default*, *supra* note 81.

235 *See* Bratton & Gulati, *supra* note 7; Eichengreen, *supra* note 228, at 32; Taylor, Using Clauses, *supra* note 15; *see also* Christopher Bowe & James Harding, *Wall Street Wants Fiscal Prudence, Voters Want Money in Their Pockets*, FIN. TIMES, Dec. 10, 2002, at 23; Gulati & Skeel, *supra* note 4, at 3.

236 Bratton & Gulati, *supra* note 7. This was as likely a strategic feint as anything else: "The U.S., which is still formulating its tactics for the [April IMF] meetings, may decide to leave the threat of the SDRM alive as an incentive for emerging market countries to follow its alternative proposal . . . ." Beattie, *supra* note 76, at 13.

237 *See* EICHENGREEN ET AL., *supra* note 14, at 9.

A final cue that may prove important in the further evolution of sovereign debt contract standards is creation of the mechanisms necessary for the efficacy of a CAC regime. Most particularly, this calls to mind Bratton and Gulati's proposed judicialization of the development of intercreditor duties in sovereign debt contracts.[238] The emergence of such a regime, in essence, might serve to raise expectations that a strong CAC arrangement might realistically be chosen by sovereign debtors and accepted by creditor markets.[239]

Collectively, these nearly simultaneous acts, decrees, and pronouncements of the United States, the G-7, the IMF, and others helped to facilitate the transition from UACs to CACs, without ever mandating as much. They might be said to have done no more than create some "constructive ambiguity" with regard to future action (or inaction) by the official sector.[240] Given resulting adjustments in debtor and creditor expectations, the need to minimize the costs of restructuring may have come to loom larger for both groups, creating wider expectations of a shift to the more efficient CACs, and thereby inducing that shift.

2. *Emerging Market Regulatory Cues*

By contrast with the foregoing regulatory cues, several important cues behind the recent shift to CACs were signaled by developing countries themselves. Perhaps most importantly, the transition to CACs may have been encountered by emerging markets' growing willingness to press forward with restructuring, regardless of creditor or official sector opposition.[241] Essentially, recent events may have signaled that debtor nations would find a way to restructure their debt, without regard to the conventional "stick" of reputational harm in the capital markets.[242] If such willingness was becoming the norm, then more efficient mechanisms of restructuring, such as CACs,

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238 *See generally* Bratton & Gulati, *supra* note 7.

239 A related cue that deserves note was the encouragement of CACs through the preparation of draft CAC language by the G-7, as well as several groups of creditors. *See* EICHENGREEN ET AL., *supra* note 14, at 35; Choi & Gulati, *supra* note 5, at 993. Such language may reduce the cost of developing CACs, and therefore heighten expectations of their adoption.

240 *See* Bratton & Gulati, *supra* note 7.

241 *See* Eichengreen, Crisis Resolution, *supra* note 54, at 15 (noting the example of Russia in 1998).

242 After Ecuador's use of New York law amendment clauses to modify the nonfinancial terms of its Brady Bonds and Eurobonds, and thereby induce participation by holdout creditors, "[e]xpressions of praise and outrage, depending on the source, inevitably followed." *See* Buchheit & Gulati, *supra* note 12, at 1334.

would increasingly be preferred by creditors and debtors alike, and a shift to CACs might be expected.

Ecuador was perhaps the greatest contributor to this particular cue.[243] In 2000, in the face of expected repayment difficulties on its outstanding debt, Ecuador proposed to restructure its debt, by exchanging it for new bonds with longer terms, but reduced interest rates. To minimize the potential for costly holdouts, Ecuador made use of so-called "exit consents." Under this scheme, creditors who agreed to the exchange simultaneously gave Ecuador their proxy for changes to the *nonfinancial* terms of the existing bonds. Because such changes required only a majority vote, even in UAC contracts, Ecuador was able to secure the authority to amend the nonfinancial terms of the old debt, without regard to any dissenters from the exchange itself.[244] Yet through selective changes to the nonfinancial terms of the bond issue (including choice of law), Ecuador could dramatically reduce the liquidity and overall value of the old bonds. As a result, potential holdouts had little incentive to refuse the exchange, as evident in their nearly universal agreement to what was nominally a "voluntary" exchange.

Other debtor states followed Ecuador's lead toward more aggressive forms of restructuring, whether through exit consents or other techniques. This included Russia, which offered a unilateral exchange in 2000, and Pakistan and Ukraine, which likewise took a "take-it-or-leave-it" approach.[245] In the case of Uruguay, meanwhile, separate negotiations with private creditors permitted restructuring to occur, notwithstanding the limited support of the IMF, which had previously been considered a precondition to any attempt at restructuring.[246] Collectively, these aggressive moves by emerging markets to restructure their debt between 2000 and 2002 may have served as an important cue in changing prevailing expectations. If these countries could do it, so could others.[247] Their ability to force a restructuring of their debt, and the fact that the IMF had essentially let them get away with it,[248] made clear that "the

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[243] *See id.* at 1331, 1334; Silverman & Deveno, *supra* note 51, at 184; *see also* Choi & Gulati, *supra* note 5, at 932-35 (describing role of Ecuador exit consent in subsequent contractual shifts). On Ecuador, see also Felix Salmon, *The Buy Side Starts to Bite Back,* EUROMONEY, Apr. 2001, at 46, 58-59.

[244] *See* Choi & Gulati, *supra* note 5, at 933; Choi & Gulati, *supra* note 132, at 15; *see also* Lee C. Buchheit & G. Mitu Gulati, *Exit Consents in Sovereign Bond Exchanges*, 48 UCLA L. REV. 59 (2000).

[245] *See* Buchheit & Gulati, *supra* note 12, at 1346.

[246] *See* Porzecanski, *supra* note 178, at 20; *see also* EICHENGREEN ET AL., *supra* note 14, at 29-30.

[247] *See* Porzecanski, *supra* note 178, at 20.

[248] *See* Boorman, *supra* note 15, at 61.

era of bondholder immunity from restructuring" was over.[249] As such, creditors might be expected to increasingly favor a shift to CACs.

Another emerging market cue of importance, at least for the later phases of the transition to CACs, was Mexico's successful issuance of a New York law bond with CACs. By avoiding the imposition of any substantial discount, Mexico undermined the claim that CACs would be costly for developing economies.[250] This signal arguably began to take shape even earlier, in fact, with Lebanon's and Qatar's placement of CAC bonds in 2000, and Egypt's similar issue in 2001.[251] While these were private placements,[252] the fact that they did not register with the markets as aberrational may have been an important cue that CACs would not be unwelcome on the market.

In coordination game terms, the collection of cues outlined above helped to encourage an expectation among debtors and creditors that their peers were increasingly more likely to shift to CACs. This allowed some to make the shift, which in turn caused others to do so. In network terms, these regulatory cues helped to tip the market to CACs. They did so not by means of coercion, whether dictating or affirmatively rewarding the use of CACs, but instead by signaling expectations of a transition to them.

C. The Nature and Role of Regulatory Cues

From the enumeration of potential regulatory cues in the prior section, it is readily apparent that the particular character and form of such cues may vary widely. Nonetheless, one might analyze regulatory cues along the paired dimensions of relative coerciveness and information provision. Along the first axis, of coercion, public intervention in sovereign debt contracting may range from acts that are purely cues and have little potential for coercion, to more coercive acts, approximating law or regulation as ordinarily conceived. Along the second axis, cues might be plotted based on how much information they

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[249] *See* Bratton & Gulati, *supra* note 7; Choi & Gulati, *supra* note 5, at 934, 939. In fact, the period from 2000 to 2002 was characterized by growing talk of ways in which emerging markets might achieve their restructuring goals, without recourse to conventional, negotiated workouts. In particular, one might note J.P. Morgan's "two-step" process, *see* Roubini & Setser, *supra* note 14, at 25, by which outstanding debt would be exchanged for new debt with CACs, which would then be restructured. *See* Boorman, *supra* note 15, at 59, 60, 68-69; *see also* Choi & Gulati, *supra* note 5, at 934.

[250] *See* Choi & Gulati, *supra* note 5, at 966-69.

[251] *See* Eichengreen et al., *supra* note 14, at 3 n.3; Anthony Richards & Mark Gugiatti, *The Use of Collective Action Clauses in New York Law Bonds*, 35 GEO. J. INT'L L. (forthcoming 2004); *see also* Choi & Gulati, *supra* note 5, at 960.

[252] *See* EICHENGREEN ET AL., *supra* note 14, at 22.

provide to coordination game participants, whether regarding the benefits of coordination generally, or the likely return on particular coordination equilibria. These twin scales, which do not posit competing characterizations of cues as either coercive or informational, but rather acknowledge the possibility of cues that are at once coercive in tenor and information-rich, or vice-versa, can be considered in turn.

1. Cues and Coercion in Sovereign Debt Contract Transition

Among the most important characteristics of regulatory cues is their noncoercive nature.[253] In essence, they can be distinguished from public regulation as conventionally conceived, because their efficacy does not depend on the threat, imposition, or even existence of any public sanction. As I have elaborated elsewhere, regulatory cues may resolve even intractable coordination problems, without restraints on parties' behavior—the ordinary mechanism of legal regulation.[254] Given the strategic dynamic of coordination games, in which players' expectations, rather than incentives, require adjustment, cues function by offering information, facilitating inter-action, and encouraging common understandings.

Notwithstanding their noncoercive nature, however, regulatory cues can be defined along some continuum of relative "coerciveness." This is evident in the examples above. The United States's pressure on Mexico and other investment-grade markets to incorporate CACs into new bond issues falls at the relatively coercive end of the spectrum.[255] As suggested above, such pressure may serve a cueing function, but may—whether by design or inadvertence—also coerce a change in behavior. Mexico may have had great confidence that U.S. pressure to shift to CACs was toothless and may consequently have adjusted its contract standards based only on the cueing effect of U.S. policy. Yet even a small possibility of U.S. sanction may have been enough to have altered Mexico's incentive to use UACs instead of CACs, and thus have coerced the transition to CACs.[256] Besides U.S. encouragement of CACs, other relatively more coercive cues might be the IMF's insistence on

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[253] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 255-59. Other important features of regulatory cues include their complex intertwining of public and private functions and their fundamentally expressive character. *See id.* at 259-65.

[254] *See id.* at 255-56.

[255] *See supra* notes 215-21 and accompanying text.

[256] Although I highlight the threat of sanctions as coercion, it is important to note that the provision of rewards is no less coercive, as the latter concept is used here. In both cases, behavior is modified based on altered incentives, and not simply altered expectations.

the seemingly unrealistic SDRM, and the United States's abrupt expression of potential interest in that proposal in mid-2002, notwithstanding its prior strong resistance to it.[257]

At the opposite end of the continuum of coercion, meanwhile, are various patently noncoercive cues, including most, though not all, of the cues originating from debtor states themselves. Ecuador's use of exit consents is one example. Mexico's successful issuance with CACs is another. Developed countries' promised and actual use of CACs in their own bonds also lacked any coercive dimension and was a pure cue.

Falling somewhere in the middle, finally, are cues such as the growing emphasis on the IMF's obligation to limit bailouts and the imposition of such limits in several important cases. Speculatively, a possible intermediate cue might be a speech by Alan Greenspan favoring a transition to CACs. While more coercive than the foregoing emerging market cues enumerated above, these examples fall far short of the near-regulatory character of U.S. pressure on emerging markets to use CACs and the IMF's threat of an SDRM.

It bears emphasizing, however, that even seemingly coercive cues are not coercive at heart.[258] Rather, debtors and creditors may choose to reject an inefficient coordination equilibrium signaled by public authorities, whether it be the United States or the IMF.[259] They can be expected to do so, moreover, in any case where the inherent inefficiency of the proposed solution outweighs any resulting coordination, or network, benefits.[260] If the "costs" of CACs to

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[257] *See supra* Part III.B.1.

[258] *See* Ahdieh, *Law's Signal*, *supra* note 5, at 256-59. To this effect, Edna Ullmann-Margalit has suggested that coordination norms are "used" or "conformed to" by private parties, rather than complied with. *See* ULLMANN-MARGALIT, *supra* note 199, at 98.

[259] *See* LEMLEY & MCGOWAN, *supra* note 98, at 545.

[260] *See* Randal C. Picker, *Simple Games in a Complex World: A Generative Approach to the Adoption of Norms*, 64 U. CHI. L. REV. 1225, 1285 (1997). A somewhat parallel dynamic can be observed in experimental analyses of what have been termed "Ultimatum" games. *See generally* Werner Guth et al., *An Experimental Analysis of Ultimatum Bargaining*, 3 J. ECON. BEHAV. & ORG. 367 (1982). In this situation, an allocator (or proposer) proposes how to divide a sum of money. The receiver (or responder) must then choose to accept or to refuse the proposal. If the receiver refuses it, however, neither player will receive any payoff. In this dynamic, as little as a penny should be accepted by a rational receiver. Economists have observed a tendency toward a breakpoint, however, below which receivers reject the proposal, notwithstanding the consequent loss to themselves. *See, e.g.*, Colin Camerer & Richard H. Thaler, *Anomalies: Ultimatums, Dictators and Manners*, J. ECON. PERSP., Spring 1995, at 209, 210; Elizabeth Hoffman et al., *On Expectations and the Monetary Stakes in Ultimatum Games*, 25 INT'L J. GAME THEORY 289, 291-92, 295-96, 299-300 (1996); Peter H. Huang, *Dangers of Monetary Commensurability: A Psychological Game Model of Contagion*, 146 U. PA. L. REV. 1701, 1711-12 (1998).

Mexico were sufficiently high, for example, Mexican authorities would be expected to have more forcefully resisted any U.S. pressure to adopt them.

Stating the point slightly differently, even the most coercive-seeming regulatory cues are not meant to dictate coordination, at least in the first instance. Instead, they seek to encourage efficient coordination, by influencing the expectations of coordination game participants.[261] In the transition from UACs to CACs, thus, a shift was never dictated. Rather, the array of cues outlined above collectively pointed to a likely adjustment of individual debtor and creditor strategies to favor the incorporation of CACs. In this way, expectations—and ultimately behaviors—changed. Had the relevant debtors and creditors found the benefits of the use of CACs, including both their inherent value and network value, to be sufficiently less than the existing benefits of UACs, no individual cue, or even collection of them, would have been effective in prompting a transition.[262]

Even if regulatory cues have the capacity to accomplish efficient transition without need for coercion, however, the category of most coercive-seeming cues—U.S. pressure for the adoption of CACs, the IMF's SDRM proposal, and the like—would seem to beg the question of what dynamic actually triggered the shift to CACs. Perhaps a coercive story offers a better, or at least a simpler, account of the transition? This sharper narrative of the recent transition in sovereign debt contracting, one favored by the maxim of Occam's Razor,[263] would acknowledge the presence of network effects and the resulting tendencies toward lock-in and tipping in sovereign debt contracting practice. It would not identify noncoercive regulatory cues as the trigger behind the ultimate transition, however, but transnational coercion by the United States, other developed countries, and the IMF. In this view, pressure from the United States to abandon UACs and to choose CACs over the SDRM can fully explain the observed patterns of transition. Such a theory, in fact, could point to the very same collection of public acts that I label as only *seemingly* coercive and suggest that appearances may not be deceiving in this case. Rather, seeming coercion by the United States may have actually coerced the shift to CACs.

The present account does not entirely dispute this version of events. Rather, a cueing theory of the transition from UACs to CACs acknowledges

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261 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 258-59.

262 *See id.* at 256.

263 *See* Tracey E. George & Robert J. Pushaw, Jr., *How Is Constitutional Law Made?*, 100 MICH. L. REV. 1265, 1275 n.38 (2002).

the potential for multiple triggering events, including some element of coercion.[264] An accounting grounded exclusively in coercion, however, sits uneasily with the delay between the onset of external pressure to move to CACs, and the ultimate decision of Mexico and others to make that shift. With an eye to this delay, the present analysis posits that something additional may have been at work—namely, the effect of the collection of regulatory cues enumerated above, all pointing toward the likely, but not mandatory, shift to CACs by an array of autonomous sovereign debt creditors and debtors.

Yet if at least some of what I identify as regulatory cues—including U.S. pressure on emerging market debtors—are likewise tools of coercion, does the distinction between cueing and coercion not become mere semantics? What distinguishes the most coercive-seeming cues from coercion? In essence, the answer lies in the particular motivation to change strategy in coordination games, including network environments such as the transition of contract boilerplate. In the Prisoner's Dilemma and other noncooperative strategic situations to which conventional legal regulation seems to respond, players shift their behavior to socially preferred alternatives in the face of changes in their incentives to choose a particular strategy. Law and regulation facilitate efficient outcomes by altering parties incentives. In coordination games, by contrast, players change strategies not because of any change in incentives, but because their expectations regarding the strategy of their counterpart have changed. As described above, thus, regulatory cues are directed to expectations, not incentives.

What might this mean in practice? How is the cue of U.S. encouragement of a shift to CACs any different than the coercion of U.S. pressure to shift? The coercive account posits that Mexico's incentives to use UACs instead of CACs in its bond contracts, and the analogous incentives of other emerging markets, were altered by U.S. pressure. The costs of utilizing UACs increased, thus, once the threat of direct or indirect U.S. sanctions—broadly defined, of course—became clear.

A cueing analysis, observing the same U.S. behavior, suggests that a different mechanism might have been at work. U.S. pressure may have primarily served to alter Mexico's expectations regarding emerging markets use of UACs versus CACs in the years ahead. In combination with the other cues enumerated above, the cueing theory posits that U.S. pressure may have

[264] Similarly, it acknowledges that various non-network factors may have contributed to the long pattern of UAC lock-in in New York law bonds. *See supra* Part I.A.

simply signaled to Mexican authorities that other debtors, as well as creditors, were likely to shift to CACs. Given as much, a transition to the latter by Mexico became appropriate as well.

Far from mere semantics, this difference has important implications for the conception and design of state action. It suggests, for example, that even if Mexico knew it would face no sanction for its failure to respond to U.S. demands—imagine, for example, that it had been offered clear guarantees to that effect, or even that it was strong enough to resist such pressure[265]—it might nonetheless have made the shift to CACs. It would do so not based on U.S. coercion, at least of Mexico itself, but based on its expectation that other nations would respond to U.S. pressure—or the perception of U.S. pressure—by shifting to CACs. In this view, Mexico might even shift to CACs in the absence of *any* pressure from the United States, but instead in response to real or perceived pressure on Brazil, Russia, or other emerging markets.

Perhaps most importantly, a cueing model of the transition from UACs to CACs offers the lesson that coercion may not be necessary to achieve efficient transition. Thus, regardless of whether Mexico's decision to shift to CACs, and the ensuing decisions of other emerging markets, were driven more by coercion or cueing, ensuing changes in sovereign debt contracting practices may not require coercion. More generally, cueing theory suggests that public authorities may be able to rely on a cueing function of law in a number of areas in which coercive regulation has conventionally been the norm. Policy goals vis-à-vis a given subject of regulation (whether a nation-state or domestic private actor), finally, may be achieved without need for sanction, or any action regarding that particular subject, as opposed to other, similarly situated subjects of regulation.

2. *Regulatory Cues as Sources of Information*

A second continuum in the characterization of regulatory cues is the amount of information provided by the relevant cue. To what extent does it serve its coordination function by enhancing the quality, and perhaps simply the commonality, of the information available to coordination game participants? Expectations regarding the likely choices of other players—the

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[265] Even if Mexico was politically or economically strong enough to resist U.S. pressure to adopt CACs, thus it might nonetheless shift to CACs, based on its expectations regarding other countries' ability (or inability, to be more precise) to resist U.S. pressure.

key to any shift among Nash equilibria in the coordination game of contract boilerplate transition—are ultimately a question of information.[266]

Information regarding the value of an alternative equilibrium, as well as the costs of transition to that equilibrium, will thus enhance or diminish expectations regarding the occurrence of a transition.[267] In essence, information may render a given coordination point more focal and thereby encourage coordination around that point.[268] This information function is apparent in the regulatory cues enumerated above, as is the gradation of its importance in the operation of various cues.

Mexico's nondiscounted bond issuance, notwithstanding its inclusion of CACs, is perhaps the best example of a regulatory cue serving as a source of information—in that case, to other potential issuers. Other information-oriented cues in sovereign debt contracting might include the willingness of the IMF and G-7 to allow several important sovereign debtors to go into default and the ability of several developing countries to go at it alone in their restructuring.[269] The Greenspan testimony imagined above might be construed as an important informational regulatory cue, as would a publicly commissioned study of the efficiency gains from a shift to CACs and the potential debtor premiums for such a shift.[270] By contrast, the seemingly feigned interest of the United States in the SDRM and the U.S. pressure on Mexico to issue debt with collective action provisions were relatively less directed to information provision, at least in any meaningful sense.[271]

Ultimately, then, along the twin axes of relative coerciveness and the extent of information offered by a regulatory cue, we can plot an array of cueing behaviors of public authorities. U.S. pressure on Mexico was relatively more

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266 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 258-59. To related effect, Anne-Marie Slaughter speaks of "regulation by information." *See* ANNE-MARIE SLAUGHTER, A NEW WORLD ORDER 24 (2004).

267 Elsewhere, I have described the respective role of regulatory cues in facilitating coordination outcomes generally, and in facilitating the Pareto efficient Nash equilibrium particularly. *See* Ahdieh, *Law's Signal*, *supra* note 5, at 247-48. Cues' provision of information might be conceived as directed to these same two ends. Some information points to coordination generally as optimal, while other information favors a particular coordination outcome.

268 Besides offering information regarding the value of a particular equilibrium, regulatory cues might also, by providing information, be seen to be enhancing that value. I am grateful to Steve Choi for noting this point.

269 *See* Choi & Gulati, *supra* note 5, at 934 (describing Ecuador's exit consents as source of information for other sovereign debtors).

270 The IMF, in fact, has supported several such studies.

271 *See supra* Part III.B.1.

coercive, and less information-intense. Mexico's successful issuance, by contrast, was primarily important as a source of information, and had little or no coercive dimension. Finally, the IMF's failure to prevent several countries from falling into default may have been both relatively coercive, and an important source of information to participants in the coordination game of sovereign debt contracting.

3. *The Shifting Role of Regulatory Cues in Sovereign Debt Contract Transition*

A final point regarding the role of regulatory cues in facilitating change in boilerplate contract terms concerns the application of such cues in distinct circumstances and contexts. The need for greater or lesser coerciveness, as well as the nature and extent of information offered by cues in facilitating contract transition, can be expected to vary, depending on the particular dynamic within which the relevant cue is meant to operate. Thus, different demographic and transitional dynamics among participants in distinct cases of boilerplate contract transition may demand different forms of regulatory cues.

Perhaps most importantly, this variable nature of cueing forms might be expected to turn on the stability of the status quo equilibrium.[272] The longer Nash equilibrium has been in place, the relatively greater the coercive tenor or amount of information contained in any cue may have to be, in order to achieve the desired change in player expectations. Additonally, the greater the number of players who operate at the status quo equilibrium, and the consequently greater the network value of that equilibrium, the greater the potential need for coercion or information. In essence, shared expectations may be more difficult to achieve across a larger and/or more heterogeneous population. Across a wider universe of more diverse participants, information may be more difficult to share, absent the public intervention of regulatory cues.[273] Conflicting cues may also increase the need for more coercive-style cues. Amidst the noise of various cues favoring an expectation of alternative, and even competing, outcomes, cues of a coercive tenor may be particularly focal, and hence effective.

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272 *Cf.* Ahdieh, *Law's Signal*, *supra* note 5, at 243.

273 It bears reiterating, in this regard, that regulatory cues' degree of coerciveness and information-provision are not competing characteristics. Rather, a given cue might be quite coercive in tenor, yet also provide substantial coordination-related information.

Finally, even partial displacement of the dominant equilibrium may allow relatively less coercive cues to facilitate efficient transition. Choi and Gulati's analysis of network effects in sovereign debt contracting would seem to suggest as much.[274] Thus, as long as the dynamics of the market involved solely a choice between longstanding and widely adopted UACs and less familiar CACs, existing cues were inadequate to trigger transition. In the aftermath of Ecuador's use of exit consents, however, this dynamic changed. With Ecuador's decision, the equilibrium choice of UACs was bifurcated into two strategies, offering UACs as conventionally understood and applied or the prospect of their circumvention through the use of exit consents.[275] Now, with the focal character of UACs somewhat diminished, regulatory cues could effectively shift the market to the CAC alternative.[276]

As this analysis suggests, regulatory cues are not a panacea. While cues may be as effective as regulatory coercion in the presence of network effects and a resulting coordination dynamic, they will not always be so. While strong network effects can enhance the efficacy of regulatory cues, they may also raise too high a barrier to the effective operation of cues. In such circumstances, ordinary regulation may be needed to at least displace the inefficient status quo equilibrium, even if not necessarily to replace it. Likewise, too great an array of conflicting cues, unlike the relative unanimity of the signals identified above, may limit the efficacy of a cueing approach. At least in sovereign debt contracting, however, noncoercive cues would appear to have been sufficient to facilitate transition to the Pareto superior Nash equilibrium of CACs.

IV. REGULATORY CUES IN THE INTERNATIONAL FINANCIAL ARCHITECTURE

Having identified the role of regulatory cues in the recent transition from UACs to CACs and described important aspects of the nature of such cues, a few comments on the potential importance of cues in the ongoing transition in sovereign debt contract standards deserve note. A role for cues remains essential, but its precise scope and limitations must be appreciated as well.

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274 *See* Choi & Gulati, *supra* note 5, at 936-38.

275 Choi and Gulati describe a similar conception of the consequence of Ecuador's decision for the existing equilibrium, and suggest it created additional axes along which sovereign debt contracts might vary. *See id.* at 933.

276 Additional Nash equilibria might also reduce the prospects of displacement, however, by diminishing the focal force of a singular alternative equilibrium, such as CACs.

A. Between Mandate and Market: Cueing Transition in Sovereign Debt Contracting

This Article's analysis has direct implications for the appropriate role of national authorities and the IMF in facilitating more efficient sovereign debt restructuring. Until now, the debate around this issue has been posed as a choice between the IMF's institutional approach—the creation of an SDRM—and the contractual approach favored by the United States, which hoped the increased use of CACs would reduce delays and other inefficiencies in debt restructuring. As between these stark alternatives, cueing theory stands somewhat closer to a contractual approach. It suggests that an efficient scheme for sovereign debt restructuring can emerge without the need for the complex mandates and institutions of the SDRM.

Yet cueing theory goes further in its challenge to the need for regulatory mandate in sovereign debt contract transition. Before the recent shift to CACs, many proponents of the contractual approach could be heard to encourage regulators to dictate the universal adoption of CACs. Many thus argued for IMF conditionality to be used to mandate sovereign debtors' use of CACs.[277] Cueing theory would deny the need for such regulation, a view seemingly affirmed by the noncoerced shift of the market in 2003. Yet even as CACs have become the norm, notwithstanding the lack of regulatory mandate, calls for coercive regulation have not abated, including among contractarians. A strong chorus has thus called for regulatory intervention to dictate *standardization* in the terms of collective action utilized in sovereign debt contracts.[278] New debt contracts have adopted varying percentage requirements for majority action (as well as distinct definitions of a qualified majority), and have applied those requirements to different sets of enumerated contract changes. In the face of such divergence, many have proposed that the IMF and national authorities mandate specific CAC provisions, in order to facilitate ultimate convergence around those provisions: "[The international

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[277] *See* Boorman, *supra* note 15, at 67-68. Others proposed that domestic authorities, such as the SEC, act to dictate transition to CACs. *See* Roubini & Setser, *supra* note 14, at 13-14 (describing potential regulatory interventions by the SEC and various international institutions); *see also* Bratton & Gulati, *supra* note 7. A cueing theory of contract transition, however, denies the need for the SEC to mandate CACs in SEC-registered bonds, *see* Roubini & Setser, *supra* note 14, at 23-24, or to make CACs a legal requirement for enforcement of bonds in U.S. courts (in an inversion of the Trust Indenture Act, *see* EICHENGREEN ET AL., *supra* note 14, at 36), or for the IMF to amend its Articles of Agreement or offer preferred interest rates based on the use of CACs. *See* Eichengreen, Crisis Resolution, *supra* note 54, at 15.

[278] Even Under Secretary of Treasury John Taylor has suggested a potential need to mandate adoption of standardized CACs. *See* EICHENGREEN ET AL., *supra* note 14, at 36-37.

community] needs to do more than examine, encourage and consider. Without the introduction of actual legislation and regulation in the creditor countries, progress on this front is unlikely."[279]

Cueing theory, by contrast, suggests that network effects can be expected to achieve desirable standardization, without the need for coercive public intervention. Again, recollection of the coordination game dynamic at work in sovereign debt contracting is helpful: In this environment, players hope to agree—to converge—in order to tap beneficial network effects, and simply require the information necessary to develop accurate expectations of one another. This, of course, is adequately offered by noncoercive regulatory cues.[280]

This is not to suggest that there may not be other reasons to mandate transition, or subsequent standardization, in sovereign debt contracting. Barry Eichengreen suggests the need to adopt CACs as a matter of law, given the risks of litigation[281] and other potential difficulties.[282] While there may be numerous reasons to mandate the adoption of CACs, and particular forms thereof, cueing theory counsels that neither the goal of adoption generally, nor a desire for rapid adoption or even uniform CAC standards, requires mandate.[283] With the careful use of regulatory cues, rapid and widespread adoption of standardized terms can be predicted.

Notwithstanding the challenge of cueing theory to the imposition of regulatory mandate, however, it does not favor a purely contractual approach to sovereign debt restructuring standards either. While cueing theory challenges the argument for mandate, it likewise recognizes limits on the capacity of the market to facilitate efficient transition on its own. As we have already seen, in the network environment of sovereign debt contracts,

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279 Portes, *supra* note 16, at 71; Eichengreen, Crisis Resolution, *supra* note 54, at 15.

280 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 255-59 (describing capacity of cues to function without need for public sanction). Thus, while I agree with Choi and Gulati that contract standardization *may* require some extra-contractual process or regime, I offer the possibility that it may not. *See* Choi & Gulati, *supra* note 5, at 932.

281 *See* Eichengreen, Crisis Resolution, *supra* note 54, at 9-10.

282 *See id.* at 11-12. Because Eichengreen highlights adverse selection as a central obstacle to efficient transition, he argues for greater intervention than the present analysis suggests, including proposals for IMF conditionality and favorable interest rates for CAC users. *See id.* at 15. In subsequent analyses, in fact, Eichengreen has suggested even more aggressive forms of regulatory intervention, given questions of the legality of the foregoing approaches, as well as questions of time consistency.

283 *See id.* at 12-13 (proposing amendment of IMF Articles or domestic law to encourage adoption of CACs).

unanimous action standards were locked-in and difficult to displace, despite their relative inefficiency.[284]

Even with the prevailing standard of UACs now eliminated, there is no guarantee that the standard that emerges will be optimal. Notwithstanding the capacity of network effects to produce desirable standardization, as described above, the pattern of tipping in network environments also means that there is no guarantee of efficient outcomes.[285] Rather, in network environments, a first-mover is likely to prevail.[286] If network size matters, each new entrant can be expected to elect the largest available network, producing a bandwagon effect leading to the initial entrant. This will be true, at least at the margin, regardless of the efficiency of the preliminary standard.[287] The dominant first-mover is unlikely to be displaced, moreover, once it establishes itself. With network effects, thus, a suboptimal standard will not necessarily fail or quickly be replaced.[288] Rather, in network environments, "[i]nefficient institutions that are not conducive to economic growth and development can emerge and survive."[289]

As a result, a network effects and coordination game theory of sovereign debt contracting cannot endorse a purely contractual approach to the evolution of contracting norms and standards, whether it be the choice of UACs or CACs, the election of a particular form of CAC, or the determination of other standard-setting issues.[290] Instead, cueing theory suggests that some public

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[284] *See supra* notes 150-73 and accompanying text.

[285] *See* Ahdieh, *Making Markets*, *supra* note 5, at 316-17; *see also* Katz & Shapiro, *supra* note 174, at 94 (noting first-mover advantages arising from sunk costs of particular computer systems). This outcome, of course, assumes exclusivity—that is, an inability to join multiple networks at once. *Cf.* Bratton & Gulati, *supra* note 7 (noting first-mover issues).

[286] *See* Joseph F. Brodley & Ching-to Albert Ma, *Contract Penalties, Monopolizing Strategies, and Antitrust Policy*, 45 STAN. L. REV. 1161, 1163-64 (1993) (noting that new entrants into a market often find themselves handicapped by their late arrival); *cf.* Nicholas Economides, *The Economics of Networks*, 14 INT'L J. INDUS. ORG. 673, 694 (1996); Katz & Shapiro, *supra* note 174, at 107.

[287] *See* Karl Warneryd, *Network Externality and Convention*, *in* 2 DICTIONARY OF ECONOMICS AND THE LAW, *supra* note 181, at 676 (noting decisive character of initial player's strategy in sequential coordination game). Conversely, potential first-mover advantages and tipping-related monopoly rents might also serve to spur competition and industry growth, as some believe has occurred in Silicon Valley.

[288] *See* Daniel R. Fischel & Sanford J. Grossman, *Customer Protection in Futures and Securities Markets*, 4 J. FUTURES MKTS. 273, 292 (1984).

[289] Stefan Voigt & Hella Engerer, *Institutions and Transformation—Possible Policy Implications of the New Institutional Economics*, *in* FRONTIERS IN ECONOMICS 131, 139 (Klaus F. Zimmermann ed., 2002); *see* Shelanski & Sidak, *supra* note 98, at 9 ("The market leaders will set the technological standard . . . even if other technological standards are superior in some economic or engineering sense.").

[290] The persistence of *pari passu* clauses may also evidence network lock-in. *See* Choi & Gulati, *supra* note 5, at 994.

impetus may be needed for efficient sovereign debt contract transition.[291] "The historical evidence—and developments since the Mexican crisis—indicate that the markets will not spontaneously achieve [efficient] outcomes. The equivalent of law is required, although not the kind of law that would be needed to establish an international bankruptcy court."[292] The kind of "law" that is needed, I would suggest, is regulatory cueing.

Choi and Gulati's analysis of the patterns of transition in sovereign debt contracts resonates with this conclusion. To this effect, they speak of small changes that may help lead to even larger later changes.[293] Likewise, they describe a role for the official sector grounded in the exact tasks of encouragement, education, and facilitation that regulatory cues are meant to achieve.[294]

Bratton and Gulati also echo the notion of an initial cueing-like role for the official and public sector, followed by a more limited (but still essential, I suggest below) role thereafter:

> Under this view, a sovereign bankruptcy regime need do little more than trump UACs with CACs and then leave the parties free to renegotiate their contracts. With CACs in place (however imposed), the parties simply can be remitted to the law governing their contracts—the law of the State of New York in most cases—without needing the adjudicatory or administrative assistance of a bankruptcy infrastructure.[295]

Yet cueing theory differs slightly at both ends. Bratton and Gulati hint at greater dictation of CACs at the outset than a cueing approach would suggest.

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[291] *See* Roubini & Setser, *supra* note 14, at 13, 24. As noted above, even the U.S. Department of the Treasury seems to have acknowledged the need for some public intervention in the sovereign debt markets, suggesting a need for collective agreement on the contractual approach as the preferred model and the development of "incentives to encourage borrowers and lenders to incorporate such terms." *See* Taylor, Sovereign Debt Restructuring, *supra* note 15. In fact, John Taylor has suggested the potential for even stronger measures, including an IMF requirement of CACs, as well as preferential IMF interest rates for bonds incorporating such clauses. *See id.* While cueing theory rejects this position, earlier Treasury assertions that no official action was necessary to achieve a transition to CACs. *See* Portes, *supra* note 16, at 67 (quoting Larry Summers, the former Under Secretary of Treasury for International Affairs, that the official sector should not "mandate the terms of debt contracts" or even adopt policies to induce borrowers to include them).

[292] Portes, *supra* note 16, at 50-51.

[293] *See* Choi & Gulati, *supra* note 5, at 934.

[294] *See id.* at 998; *see also id.* at 998, n.110 ("In the sovereign context, it is likely that the many official sector efforts at supporting research on new contract terms, in organizing conferences, and setting up drafting committees, all played an important role in producing change.").

[295] Bratton & Gulati, *supra* note 7.

Thus, in their view, "[i]f the contractarian strategy is to accomplish anything, the IMF, the U.S. Treasury, and the other G-7 nations will have to use financial threats to induce the move."[296] Further, from the perspective of cueing theory, their analysis downplays the role of state action in the ensuing evolution of contract standards.

Ultimately, a cueing approach offers the benefit of efficient transition, without dictation. It leaves the final determination of efficient outcomes to the market itself, which can decline to follow any relevant cues, and can circumvent the outcomes they lead to, should efficiency dictate as much.[297] Thus might a cueing model, finally, be analogized to Randal Picker's notion of "seeding norm clusters," by which public authorities selectively encourage certain norms, and see what happens.[298]

> Norm seeding is a low-risk strategy. If the government seeds an inefficient cluster, it will die, and little will be lost. If the new norm is superior to the old norm, however, the artificially created norm cluster will thrive and spread. This analysis suggests that the government should embrace test policies or norms or take steps to foster social meanings in particular local contexts as a way of testing whether a superior approach can take root and spread.[299]

Like norm seeding, a cueing model of state action in sovereign debt contracting does what is necessary to break network-driven coordination logjams at the outset, and at successive stages of the transition to new contract standards, but does not dictate the results of that transition. Ultimate outcomes are left to the sovereign debt market itself.

B. The Continuing Role of Regulatory Cues in Sovereign Debt Contract Transition

As suggested above, beyond their preliminary role in facilitating the shift from UACs to CACs, regulatory cues continue to have an important, if limited, role in sovereign debt contracting. A variety of significant issues in the design and standardization of CACs remain unresolved.[300] Perhaps most important is the risk of minority creditor abuse under CACs.[301] With the adoption of

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296 *Id.* at 67.

297 *See* Ahdieh, *Law's Signal*, *supra* note 5, at 256; Eichengreen, *supra* note 16, at 94-95.

298 *See* Picker, *supra* note 260, at 1284-85; *see also* Choi & Gulati, *supra* note 5, at 994.

299 Picker, *supra* note 260, at 1285.

300 *See* EICHENGREEN ET AL., *supra* note 14, at 39-40.

301 *See* Bratton & Gulati, *supra* note 7; Gulati & Skeel, *supra* note 4, at 5.

CACs, there is an urgent need for the development of norms of good faith and fair dealing, to prevent the exploitation of minority creditors by newly empowered majorities.[302] This need has triggered discussion of a "code of conduct" for sovereign debt restructuring.[303] Yet the development of such a code will require ongoing coordination to define its terms. As a preliminary matter, in fact, debtors and creditors will need to coordinate their choice of a code or various competing possibilities, including Bratton and Gulati's preference for common law adjudication of intercreditor duties in U.S. courts,[304] the IMF's proposal to require that all creditors receive the same settlement offer (or menu of offers),[305] and the possible use of trust deeds.[306]

Another outstanding issue of some importance concerns the aggregation of debt restructuring across classes of bonds, especially in those cases where the relevant sovereign has a wide array of bonds outstanding.[307] To address such aggregation problems, there is a continuing need to develop some form of "super-CAC," a norm on the use of bondholder committees, or a relevant code of creditor conduct.[308] Again, the market itself has begun this process, as suggested by the use of super-CACs in Uruguay's 2003 bonds,[309] but cues may be important in facilitating a transition to such terms.

Finally, a variety of more specific standardization issues are still outstanding.[310] Thus, it remains unclear whether the relevant percentage required for majority action should be tied to attendance at a meeting with quorum, as in English law majority action clauses, or should be a percentage of

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302 *See* Buchheit & Gulati, *supra* note 12, at 1336-42.

303 *See* EICHENGREEN ET AL., *supra* note 14, at 5, 30-32. On the value of such a code, see *id.* at 32. Much of the general discussion of codes of conduct, has been directed to the conduct of *debtors*. *See* Roubini & Setser, *supra* note 14, at 10-11. With the adoption of CACs, however, the conduct of majority *creditors* toward minority creditors, in the exercise of their majority action rights, is a newly significant concern.

304 *See* Bratton & Gulati, *supra* note 7.

305 *See* INT'L MONETARY FUND, THE RESTRUCTURING OF SOVEREIGN DEBT—ASSESSING THE BENEFITS, RISKS, AND FEASIBILITY OF AGGREGATING CLAIMS 14 (Sept. 3, 2003), *available at* http://www.imf.org/external/np.pdr/sdrm/2003/090303.pdf.

306 *See* INT'L MONETARY FUND, THE DESIGN AND EFFECTIVENESS OF COLLECTION ACTION CLAUSES 10 (June 6, 2002), *available at* http://www.imf.org/external/np/psi/2002/eng/060602.pdf.

307 *See* Buchheit & Gulati, *supra* note 12, at 1344; Skeel, *supra* note 25, at 422-23; *see also* EICHENGREEN ET AL., *supra* note 14, at 4, 15; Boorman, *supra* note 15, at 66.

308 *See* EICHENGREEN ET AL., *supra* note 14, at 5.

309 *See* Gulati & Skeel, *supra* note 4, at 4; *see also* EICHENGREEN ET AL., *supra* note 14, at 29-30. On the array of innovations in the Uruguay issue, see Choi & Gulati, *supra* note 5, at 945-46.

310 *See* Choi & Gulati, *supra* note 5, at 945-48 (identifying variety of issues on which a standard has not emerged to date); Porzecanski, *supra* note 178, at 24.

outstanding debt.[311] Likewise, the exact percentage required for majority action remains to be determined, with Brazil having set a rate of eighty-five percent,[312] rather than the conventional seventy-five percent. There also continues to be a need to reconcile various contractual provisions indirectly related to the potential for collective action.[313] These provisions include requirements for information sharing and disclosure,[314] as well as potential "engagement" requirements.[315]

As competing approaches and proposals emerge, regulatory cues can help to encourage particular standards, to avoid premature lock-in, and, perhaps more importantly, to offer valuable information on various alternatives. In this way, cues can help to facilitate the emergence of an efficient regime of CACs, just as they have already contributed to the preliminary shift from UACs to CACs.

C. Convergence and Fragmentation in Sovereign Debt Contracting

While I have emphasized the network tendency toward standardization, it bears noting in conclusion that the proposed network conception of sovereign debt contracting does not necessitate complete convergence to a network standard.[316] Rather, network effects in sovereign debt may favor beneficial standardization, yet permit some persistent diversity. A network theory of sovereign debt is thus readily reconciled with both the long persistence of MACs in English law bonds, notwithstanding the network predominance of

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311 *Cf.* Buchheit & Gulati, *supra* note 12, at 1324-25.

312 *See* Gulati & Skeel, *supra* note 4, at 5. Guatemala's bonds also set an eighty-five percent level. *See* Choi & Gulati, *supra* note 5, at 978.

313 *See* Boorman, *supra* note 15, at 67.

314 *See* Gulati & Skeel, *supra* note 4, at 4-5.

315 *See* EICHENGREEN ET AL., *supra* note 14, at 30-31. Cueing theory also has implications for the so-called "transition problem," which concerns the large pool of existing sovereign debt without CACs. *See id.* at 25. From a network/coordination game perspective, this is not an especially significant concern. While the transition problem has been asserted to favor creation of an SDRM, *see* Boorman, *supra* note 15, at 66; Roubini & Setser, *supra* note 14, at 11, if a network effects analysis is warranted, transition should not be unduly difficult. Rather, market participants can be expected to voluntarily switch to CACs in due course.

A related concern has been the potential for a regression to UACs. *See* EICHENGREEN ET AL., *supra* note 14, at 4, 17-18; Bratton & Gulati, *supra* note 7. A network analysis suggests that is unlikely to occur. Given the network tendency toward lock-in, such regression would require overcoming the network size benefits of remaining with the newly dominant CAC standard.

316 Nor does it entirely obviate the benefits of innovation. *See* Kahan & Klausner, *supra* note 107, at 350 (describing benefits of innovation).

UACs,[317] and with the continued use of UACs by a very small group of issuers under New York law, even today.[318]

Both the long persistence of UACs and MACs in sovereign debt contracts and the continued use of various forms of each[319] are consistent with the network dynamic described above, because of the existence of both network and inherent value in any contract term (or other network good).[320] Depending on the particular balance of network and inherent utility that a given user derives from the relevant good or service—that is, the blend of value dependent on, and independent of, network size[321]—some users may find that the inherent benefits of the non-network dominant choice outweigh the network gains of its more widely used competitor.[322] Such is the claim, for example, of insistent users of Apple personal computers.[323] In the eyes of the latter, greater ease of use, fewer crashes, and other perceived benefits are worth more than the greater access to software and repair services and other network gains that would follow from their use of the dominant Microsoft Windows operating system.

With sovereign debt contracts, this pattern may be manifest in some preference for UACs among higher credit risk sovereign debtors.[324] Empirical analysis has thus suggested that high-risk sovereigns may be forced to pay a premium by shifting to CACs (in the form of a wider spread), while low-risk borrowers will enjoy a savings from that shift.[325] It is at least possible, then,

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317 The same is true of the persistence of different *forms* of UACs and CACs, both in the past and today. This diversity is described by Choi & Gulati, *supra* note 5, at 960-62.

318 These include Israel, China, and the Philippines. *See id.* at 970. Ribstein and Kobayashi have critiqued the network theory of corporate contracting along such lines. *See* Ribstein & Kobayashi, *supra* note 98, at 117-18. For the reasons outlined above, this criticism is inapposite.

319 *See* Choi & Gulati, *supra* note 5, at 957-60. Choi and Gulati develop a theory of such persistence, based on the costs of larger, versus smaller, innovations. *See id.* at 944-45.

320 *See supra* notes 100-04 and accompanying text.

321 *See supra* notes 100-04 and accompanying text.

322 *See* Lemley & McGowan, *supra* note 98, at 592.

323 *See* Pamela Samuelson & Suzanne Scotchmer, *The Law and Economics of Reverse Engineering*, 111 YALE L.J. 1575, 1617-18 (2002).

324 *See* Choi & Gulati, *supra* note 5, at 963 ("Indeed, we expect that a range of preferences may exist among countries for collective-action oriented modification terms. Some countries may desire UACs without possibility of modification as a means of convincing investors of the countries' low-risk of default.").

325 *See* Portes, *supra* note 16, at 68-69; *see also* EICHENGREEN ET AL., *supra* note 14, at 4. At first glance, this result may appear counterintuitive. The shift of lower-risk sovereign debtors to CACs ought to mean little to the market, given the *low risk* of their default. High-risk debtors, on the other hand, ought to be rewarded for their shift to CACs, given the consequently greater ease of handling their much more likely future debt restructuring. Yet low-risk debtors gain, and high-risk debtors lose. The key to this puzzle lies in the central emphasis of the sovereign debt markets on moral hazard. From the latter perspective, the high-risk debtors

that the inherent benefits of UACs for high-risk debtors might outweigh any network benefit of being on the dominant network of CACs. That this was an important explanatory variable in the failure of the pre-2003 market to converge completely around the network-dominant UAC standard is suggested by the relatively strong tendency of emerging market issuers to issue UAC bonds under New York law, rather than MAC bonds under English law.[326]

The persistence of a small network of UACs after the transition to CACs may also be explained by diminishing or even declining network returns to scale, beyond some point in the demand curve.[327] Thus, network gains may accrue up to some level of use of a given term. At that point, sufficient use may exist to produce the desired degree of interpretive network effects, common practice network effects, and legal services network effects. Additional adoptions beyond that point may offer little added network utility to existing users.[328] In that case, users on a smaller, *yet sufficiently large*, network would not be expected to shift to the dominant network. Even more significantly, one might imagine a point beyond which use of a given term begins to produce negative externalities. For example, a scarce supply of legal or financial services may become more difficult or costly to access. Excessive judicial review might also potentially produce too great a diversity of interpretation, and hence an increase rather than decrease in uncertainty.[329]

Given as much, the benefits of flexible regulatory cues becomes especially evident, as compared with the public mandate of a particular majority standard for collective action, a specific enumeration of good faith obligations, or the transition to CACs generally. In essence, regulatory cues offer sovereign debtors and their creditors freedom to define their preferred terms, and thereby maximize efficiency gains. While some standardization can be predicted to result from this process, given the presence of network effects, debtors and

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with CAC bonds may be more prone to pursue restructuring, given its greater ease. The low-risk sovereign, by contrast, is expected to be adequately constrained by the reputational harm attendant to any restructuring, and will therefore avoid it, regardless of its greater or lesser ease, under CACs or UACs, respectively.

326 *See* Mody, *supra* note 17, at 14.

327 *See* Robert B. Ahdieh, Playing Games: Chicken, Battle of the Sexes, and the Model of Securities Market Transition 13 (unpublished manuscript, on file with author).

328 *See id.* at 19.

329 *See id.* at 23; Klausner, *supra* note 39, at 777 n.65. Besides these network-specific points, it bears noting that network tipping need not entail instantaneous change. Rather, a progressive transition is also consistent with the presence of network effects. The present phase of transition may therefore exhibit a greater degree of diversity than is likely to exist in the near future. This, in fact, comports with the pattern of transition described by Choi and Gulati. *See* Choi & Gulati, *supra* note 5, at 966-68 (analyzing "big shift" hypothesis).

creditors who find sufficient inherent value in preserving the non-network standard can do so in a regulatory scheme characterized by cues rather than coercion.

CONCLUSION

Freedom of contract is among the foundational features of the U.S. legal system. Yet network-driven lock-in of contract boilerplate—and the potentially related reliance on standard-form contracts—present some challenge to contractual autonomy, broadly defined. If network effects significantly restrain contracting parties in their selection of Pareto efficient contract terms, their contractual freedom might fairly be seen as constrained.

In this Article, I have considered the potential lock-in of contract boilerplate, and how such lock-in might be overcome, using the shift from stasis to change in sovereign debt contracting as a salient example. But the implications of the present analysis extend beyond the natural experiment of sovereign debt contract transition. If network effects constitute an important explanation of contract term lock-in, whether in sovereign debt contracts, corporate or real estate contracts, or other standardized agreements, it is important to consider whether there might be a broader regulatory role in preserving contractual choice than is ordinarily acknowledged.[330]

Public intervention may help to overcome network barriers to efficient contracting, yet not create its own obstacles to freedom of contract, through the noncoercive intervention of regulatory cues. At a minimum, such cues may serve to displace—but not preclude—status quo equilibrium, and thereby facilitate contracting parties' election of efficient alternatives. Cues may also offer beneficial information on the relative utility of preserving an existing coordination equilibrium versus adopting an alternative. In these and other

[330] Freedom of contract has long been a theme in the study of standard-form contracts and boilerplate contract terms. Most commonly, it has been invoked to enforce boilerplate and other terms incorporated by the drafter, in recognition of a "duty to read." Llewellyn, conversely, cites freedom of contract for just the opposite conclusion, arguing that rote enforcement of boilerplate terms eviscerates the freedom of the party bound, who has not, in any meaningful sense, assented to the relevant terms. *See* KARL N. LLEWELLYN, THE COMMON LAW TRADITION: DECIDING APPEALS 365-67 (1960). The network effects-driven pattern described herein likewise challenges the freedom of contract, not of one party or the other, but arguably of both. Network lock-in, and the resulting constraint on parties' ability to avoid inefficient constructions, or to elect an efficient alternative, is a distinct sort of challenge—but not an unimportant one—to freedom of contract in the broadest sense.

ways outlined above, regulatory cues can serve to facilitate coordination around efficient contracting norms.

It might be questioned, however, whether the lessons of sovereign debt contracting emphasized in this Article can be applied outside the peculiar institutional context of the international financial architecture. In particular, official action would seem to stand more in the foreground of sovereign debt contracting than it does in conventional contracting, in which public actors would appear to play a lesser role. Yet this may be just the point: State action may deserve a more prominent place in contracting environments—whether international or domestic—in which standard terms are widely used. It is not evident, thus, that the relative prominence of official action in sovereign debt contracting rests on any difference in kind with domestic contracting. Relevant regulatory cues will surely have a distinct character and form in different contracting environments, including international versus domestic settings. When a coordination dynamic exists, however, regulatory cues may still have an important role to play.

Just as the normative values of the freedom of contract favor a cueing approach to public intervention in private contracting, the dynamics of transnational regulation may also favor a reliance on regulatory cues. As evident in the case of sovereign debt contracting, cross-border regulation is of growing importance in today's increasingly globalized marketplace. In areas from antitrust to securities law, transnational coordination has become essential to regulatory success. Regulatory cues—as a mechanism of coordination—may constitute a valuable implement in the toolkit of national and international regulators. Through noncoercive cues, transnational policy ends may be effectively pursued, while preserving norms of national sovereignty and avoiding the extraterritorial application of law.[331]

Regulatory cues, in this vein, may be a particularly useful tool in the hands of constrained public regulators. Weak regulatory authority—whether born of normative design, as in the desire to maximize the freedom of contract; of institutional constraints, as in the international regime; or of the recency of national development, as in many transitional states—may prevent reliance on ordinary command-and-control regulation. In the presence of a coordination

[331] To this effect, Anne-Marie Slaughter has suggested the growing importance of soft power in international law and regulation given the inevitable limitations of hard power in the international sphere. *See* SLAUGHTER, *supra* note 266, at 4.

dynamic, however, noncoercive cues may be an effective regulatory alternative.

A cueing theory of law might thus be said to offer both negative and positive lessons for theories of contract and transnational regulation. In the negative, cueing theory posits that ordinary regulation—with its mandate and coercion—may not be necessary to overcome barriers to efficiency and achieve efficient outcomes. In the positive, cueing theory offers an alternative mode of public regulation. In the realm between the conventional poles of mandate and the market, cueing theory suggests a pattern of regulation that is at once adequate to achieve desired policy ends, yet restrained in its interference with contractual and national autonomy.