

BOUNTIES FOR ERRORS: MARKET TESTING CONTRACTS

ROBERT K. RASMUSSEN* & MICHAEL SIMKOVIC**

Many scholars and courts have championed a plain meaning approach to interpreting commercial contracts between sophisticated parties. These parties are assumed to carefully draft contracts to make their rights and obligations clear and knowable if the language is enforced as written. However, recent events in the commercial lending arena have raised questions about the efficacy of this approach. Aggressive parties have combed through reams of complex documents looking for ways around seemingly clear contractual barriers. For example, Hovnanian promised to intentionally default on a debt payment to one of its wholly-owned subsidiaries in exchange for favorable financing from a hedge fund whose substantial CDS short position would have otherwise become worthless. In another case, J. Crew, faced with financial distress, found a way to divert the crown jewels from the collateral package pledged to its lenders, and instead use this value to prevent a default on unsecured notes that were coming due. Both of these transactions upended the expectations of those who put the original deals together. They raise the question: how can systems that depend on clear rules evolve, correct problems and reduce unintended consequences without resorting to a subjective standard? One approach is to crowdsource error-checking to market-participants by paying bounties to those who detect and publicize flaws in rules-based systems so that problems can be diagnosed and corrected (or, at least, their consequences mitigated) by subsequently revising the rules. This article considers such an iterative approach in the context of the Credit Default Swaps Market and the syndicated loan market.

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* J. Thomas McCarthy Trustee Chair in Law and Political Science, USC Gould School of Law.

** Professor of Law & Accounting, USC Gould School of Law. Thanks to Vincent Bucola, Aditya Habbu, Adam Levitin, Richard Hynes, Jared Ellias, Steven Schwarcz, Jane VanLare, Andrew Verstein and participants at the National Business Law Scholars Conference (2019) for helpful comments and suggestions. Thanks to Zak Baron, Courtney DeKlotz, Carolyn Hudson, and Brittany L. Litzinger for research assistance.

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“Everyone has a plan until they get punched in the mouth.”

—Mike Tyson

INTRODUCTION

A venerable tradition in both judicial opinions and legal scholarship argues that the law best serves sophisticated parties when it enforces contracts according to their plain meaning.¹ The intuition is straightforward—when parties know that courts will follow their clearly spelled out dictates, they can draft documents as they choose, confident that outcomes *ex post* will be readily determinable. They can be freewheeling during negotiations, knowing that only what makes it into the executed contract will be enforced. During the life of the contract, the parties (and their employees) can refer back to the executed contract, secure in the knowledge that the words will be followed with precision. Parties can select ambiguous language to put into a contract, delegating decisions to courts *ex post*.² Yet even that is a choice. Knowing that a court will follow the dictates of the contract allows the parties to channel decision-making. This point is confirmed by the behavior of the parties involved—sophisticated parties often choose New York law to govern their disputes, knowing that New York courts have adopted a plain meaning approach to contract law.³ In areas where parties have agreed to have their disputes resolved by expert tribunals, those tribunals also adhere to a plain meaning approach.⁴ A plain meaning approach, so the argument goes, vindicates the expectations the parties had at the time they entered into

¹ James P. McBaine, *The Rule against Disturbing Plain Meaning of Writings*, 31 CALIF. L. REV. 145, 148–149 (1942); Eric A. Posner, *Parol Evidence Rule, the Plain Meaning Rule, and the Principles of Contractual Interpretation*, 146 U. PA. L. REV. 533 (1997); Robert E. Scott, *The Case for Formalism in Relational Contract*, 94 NW. U. L. REV. 847 (1999); cf. E. Allan Farnsworth, “Meaning” in the Law of Contracts, 76 YALE L.J. 939, 952 (1967).

² Robert E. Scott & George G. Triantis, *Anticipating Litigation in Contract Design*, 115 YALE L.J. 814, 814–79, 817–20 (2006).

³ See, e.g., *Sharon Steel Corp. v. Chase Manhattan Bank, N.A.*, 691 F.2d 1039 (2d Cir. 1982).

⁴ See, e.g., Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code’s Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765, 1769–70 (1996); Lisa Bernstein, *Private Commercial Law in the Cotton Industry: Creating Cooperation through Rules, Norms, and Institutions*, 99 MICH. L. REV. 1724, 1731–35 (2001).

the contract. Perhaps a looser method of interpretation may be preferable for contracts made between noncommercial parties who may not be choosing their contractual language with precision. But when documents are executed by sophisticated parties advised by high-price counsel, the words that they agree to should hold sway.

Recent cases in the distressed debt area cast doubt on this conventional wisdom. In a number of cases, some of which we describe below, a party on the losing-end of a transaction combs over the documents to find creative solutions to capture value. Such parties do not seek mere ambiguities that exist either through design or oversight.⁵ Rather, they look for “holes” in the contract. They scour the pages of complex contracts to devise unanticipated transactions that were neither contemplated nor intended by the parties to be a strategic option, but nevertheless comport with the dictates of the documents. They end up with results that all agree are at odds with the expectations the parties had when they signed the contract, but that adhere to the strict dictates of the contract. That there are holes in sophisticated contracts in this setting is not surprising. Lending contracts today routinely exceed 100 pages. However, competitive pressure limits the amount of time lawyers can spend at the drafting stage worrying about seemingly outlandish hypotheticals.⁶ The result is that even the most expensive law firms cannot preclude a clever player from later devising a transaction that was unforeseen by the parties when the contract was made.

Market data suggests that investors’ resources are increasingly flowing into battles over the meaning of commercial contracts rather than into financing companies. Assets under management at distressed hedge funds have more than doubled since 2008,⁷ even as both corporate default rates and the amount of corporate debt outstanding have declined.⁸ Investors in

⁵ See Mitu Gulati, Robert Scott & Mark Weidemaier, *Origin Myths, Contracts, and the Hunt for Pari Passu*, 38 L. & Soc. INQUIRY 72, 74–75 (2013); Tim R. Samples, *Rouge Trends in Sovereign Debt: Argentina, Vulture Funds, and Pari Passu under New York Law*, 35 NW. J. INT’L L. & BUS. 49, 52–86 (2014); W.M.C. Weidemaier, *Sovereign debt after NML v. Argentina*, 8 CAP. MKTS. L. J. 123, 123–31 (2013).

⁶ See Marcel Kahan & Michael Klausner, *Standardization and Innovation in Corporate Contracting (Or “The Economics of Boilerplate”)*, 83 VA. L. REV. 713, 718–29 (1997); Elisabeth de Fontenay, *Law Firm Selection and the Value of Transactional Lawyering*, 41 J. CORP. L. 393, 414–15 (2015). Claims about “commoditization” of legal work, such as leveraged loan documentation, are often overstated—law firms continue to be able to increase their fees annually in real terms. U.S. Bureau of Labor Statistics, *Producer Price Index by Industry: Offices of Lawyers: Business and Commercial Legal Services [PCU5411105411109]*, FRED, FEDERAL RESERVE BANK OF ST. LOUIS, <https://fred.stlouisfed.org/series/PCU5411105411109> (lasted visited March 10, 2019). Nevertheless, competitive pressures and increasingly sophisticated clients likely limit fees and hours. Abram Chayes & Antonia H. Chayes, *Corporate Counsel and the Elite Law Firm*, 37 STAN. L. REV. 277, 294 (1985).

⁷ PREQIN, DISTRESSED DEBT: WAITING FOR THE BOOM (May 2019), available at <https://docs.preqin.com/reports/Preqin-Distressed-Debt-Waiting-for-the-Boom-May-19.pdf> (reporting that distressed debt assets under management increased from \$95 billion in December of 2008 to \$226 billion by June 2018).

⁸ S&P GLOBAL RATINGS, 2018 ANNUAL GLOBAL CORPORATE DEFAULT AND RATING TRANSITION STUDY AT 3, Apr. 9, 2019, available at <https://www.spratings.com/documents/>

such funds report that they are increasingly interested in “special situations” and not just direct lending.⁹ In derivatives markets, the leading trade association has felt pressure to repeatedly amend its rules, procedures, and form contract definitions in response to aggressive investment strategies.¹⁰

This dynamic is illustrated by two recent cases in which gaps in contracts redounded to the benefit of corporate debtors. Consider first the travails of the home builder Hovnanian. Hovnanian is a moderately sized business, generating roughly \$2 billion in annual sales. To finance its operations, it borrowed approximately \$1.6 billion, including \$75 million in term loans and the remainder in bonds. Approximately \$400 million of these bonds would come due between 2017 and 2019.¹¹ Unbeknownst to Hovnanian’s managers, third parties were betting on the company’s possible financial distress. One group of investors, anticipating that Hovnanian would default on its bonds, bought credit default swap (“CDS”) protection. Another group of investors concluded that Hovnanian would remain current on its obligations and took the opposite side of the bet by selling CDS protection.

CDS are a bet between two third parties who take opposite views of the likelihood of a borrower repaying its creditors.¹² The value of single-name CDS is meant to track the creditworthiness of a borrower known as a “reference entity.”¹³ The obligation to make a payment under the CDS is triggered when there is a “credit event,” which includes actions such as filing for bankruptcy or missing a scheduled debt payment. As the reference entity’s creditworthiness deteriorates—that is, as the reference entity becomes more likely to default on its debts and the expected losses to the reference entity’s creditors in the event of default increase—CDS should become more valuable to “protection buyers” and costlier to “protection sellers.”¹⁴ As the reference entity’s creditworthiness improves, the reverse is true with the CDS becoming costlier to the “protection buyer” and more valuable to the “protection seller.”¹⁵

When it looked as if the CDS based on Hovnanian’s debt were going to expire without the occurrence of a credit event, the CDS holders induced

20184/774196/2018AnnualGlobalCorporateDefaultAndRatingTransitionStudy.pdf (reporting that from 2008 to 2018, overall corporate default rates declined from 1.8 to 1.03 percent, speculative grade default rates declined from 3.7 to 2.09 percent, and total debt outstanding declined from \$430 billion to \$132 billion).

⁹ See PREQUIN, *supra* note 7; see also Sujeet Indap, *USA Inc Faces Growing Threat from Activist Debt Investors*, FIN. TIMES (Sept. 17, 2018), <https://www.ft.com/content/98fd33c8-b93d-11e8-94b2-17176bf93f5>.

¹⁰ See discussion in Part I, *infra*.

¹¹ Hovnanian, Annual Report (Form 10-K), 31–32 (Dec. 28, 2017).

¹² Michael Simkovic & Benjamin S. Kaminetzky, *Leveraged Buyout Bankruptcies, the Problem of Hindsight Bias, and the Credit Default Swap Solution*, 2011 COLUM. BUS. L. REV. 118, 169 (2011).

¹³ *Id.* at 183.

¹⁴ *Id.* at 169–70.

¹⁵ *Id.*

Hovnanian to engage in a limited, manufactured default. Hovnanian failed to make a scheduled payment of just slightly greater than \$1 million. This payment was interest on notes that were held by one of Hovnanian's affiliated companies. Hovnanian basically chose not to pay itself. Public holders of Hovnanian notes continued to be paid, as did all of its employees and suppliers. The sole purpose of the default was to manufacture a credit event, so that the holders of CDS could cash in at the expense of those who sold the protection.

A similar situation, though implicating secured loans rather than CDS, involves clothing retailer J. Crew. The company went private in a leveraged buyout in 2011. As part of that buyout, it entered into a credit agreement with various lenders in which its obligations were backed by substantially all of the corporate assets. Two years later, a subsidiary that did not hold any of the operational assets of the company issued \$500 million in Payment-In-Kind (PIK) notes. These notes were not backed by collateral. In other words, these were promises to pay, without the backing of any current assets. Investors buying these notes had to hope that dividends would flow up from subsidiary companies. Perhaps not surprisingly, up until the due date of the notes (2019), no cash payments were made on the notes. The issuer instead elected each time to make an interest "payment-in-kind," that is, more notes.

The year after the PIK notes were issued, the J. Crew enterprise refinanced the term loan and executed a new credit agreement. Under this 2014 term loan, J. Crew again pledged to its lenders virtually all of the company's assets. Lenders thus had substantial collateral, while holders of the PIK notes had unsecured debt backed only by an entity with no operating assets.

Two years later, J. Crew engaged in a series of corporate transactions designed to reallocate value from the holders of the term loan to the holders of the PIK notes. Through these transactions, the company's intellectual property, generally considered the "crown jewels" of the collateral package, was dropped down through a "trap door," and out of the collateral package. The rights to J. Crew's intellectual property were then, in essence, transferred to the holders of the PIK notes. This technique of finding a "trap door" to drop out collateral has come to be known in the finance community as getting "J. Crewed."

Cases such as Hovnanian and J. Crew raise an important issue—as financial instruments and capital structures grow increasingly complex, and markets become more complete,¹⁶ it becomes increasingly difficult to imagine all of the possible ways in which a party could have the incentive and means to manipulate subsequent outcomes. This growing complexity raises the question of whether the legal system should revert to a more contextual approach. Some have already pointed to trends toward aggressive contract litigation in creditor disputes and called for greater judicial gap-filling be-

¹⁶ Specifically, the ability to short or hedge more easily makes markets more complete.

yond a literal reading of the language of the contract.¹⁷ They call for a more holistic approach that would allow courts to construe contracts in a way that would not reward exploitation of technical intricacies of financial contracts. Others have argued that anti-manipulation law and doctrines such as “good faith” and “intent of parties” should be expanded to police such aggressive maneuvers.¹⁸

The debate within corporate finance is part of the broader jurisprudential question of when a legal system should embrace rules versus standards. The approaches for governing conduct and adjudicating disputes fall along a spectrum from rules to standards.¹⁹ The tradeoffs of rules versus standards have been well documented. Rules, classically understood, are objective, clear, predictable, inexpensive to administer, and easy to automate.²⁰ But rules are both under- and over-inclusive and can lead to unanticipated strategic behavior and unfair results that undermine the legitimacy and acceptance of rule-based systems.²¹ Standards tend to embrace many factors, can be slow to administer, and make the outcomes of adjudication harder to predict.²² By looking at each situation closely, however, standards can more precisely vindicate underlying policy goals. In doing so, standards can deter

¹⁷ See, e.g., Jared A. Elias & Robert Stark, *Bankruptcy Hardball*, 180 CALIF. L. REV. (forthcoming 2020) (manuscript at 62–64), <https://papers.ssrn.com/abstract=3286081>. And indeed, in a recent case, *U.S. Bank Nat'l Ass'n v. Windstream Servs. LLC*, the Southern District of New York applied a broader, purposive approach in interpreting a bond covenant rather than a narrower, plain meaning approach. No. 17-CV-7857 (JMF), 2019 WL 948120, at *1 (S.D.N.Y. 2019). In *Windstream*, a telecommunications group sought to transfer its copper wire and fiberoptic infrastructure to a real estate investment trust (REIT) subsidiary to improve tax efficiency and financing options, while retaining the operational use of those assets. *Id.* at *2. However, a sale-leaseback transaction would have violated the express terms of one of *Windstream's* bond covenants if the transaction were executed by certain debtor entities (“restricted subsidiaries”). *Id.* at *2. The covenants did not explicitly prohibit all affiliates from engaging in such a transaction, and *Windstream* therefore sought to create a technical workaround by forming new entities and transferring rights to the assets to the new entities. The Southern District of New York ruled that the transactions violated the “intent” of the parties and constituted a prohibited sale-leaseback. *Id.* at *18. It is unclear if this represents a shift in New York law or is due to particular bad facts in the *Windstream* case, such as the debtor making certain representations to regulators and financial disclosures which suggested that maneuvers to avoid breaching covenants were effectively sham transactions. *Id.* at *3.

¹⁸ See Gina-Gail S. Flechter, *Engineered Credit Default Swaps: Innovative or Manipulative?*, 94 N.Y.U. L. REV., (forthcoming 2019) (manuscript at 163–65), <https://papers.ssrn.com/abstract=3286081>; William W. Bratton & Adam J. Levitin, *The New Bond Workouts*, 166 U. PA. L. REV. 1597, 1673 (2018) (arguing for a revival of intercreditor good faith duties).

¹⁹ See, e.g., Kathleen M. Sullivan, *Foreword: The Justices of Rules and Standards*, 106 HARV. L. REV. 22, 57 (1992).

²⁰ Louis Kaplow, *Rules versus Standards: An Economic Analysis*, 42 DUKE L.J. 557, 560–68 (1992).

²¹ Cass R. Sunstein, *Problems with Rules*, 83 CALIF. L. REV. 953, 992–96 (1995); David Weisbach, *Formalism in the Tax Law*, 66 U. CHI. L. REV. 860, 862–63 (1999).

²² Daniel M. Klerman & Holger Spamann, *Law Matters – Less Than We Thought*, 1–40 (USC Gould Sch. Law Cent. for L. and Soc. Sci. Res. Paper Series No. CLASS19-25, 2019), <https://ssrn.com/abstract=3439526>.

creative strategic behavior by market participants and enable a system to function as intended.²³

Neither system is perfect. A plain meaning approach can allow transactions that would have most likely been prohibited at the contracting stage if the contracting parties had comprehensively predicted potential interpretations and eventual outcomes. No one seriously contends that the lenders financing J. Crew had full certainty that they had locked down their collateral. Yet more holistic approaches can also run afoul. Judges may misunderstand context and the norms of the marketplace. A disappointed party looking backwards in litigation can testify with a moral certainty that this is not what it intended.²⁴

An important criterion in deciding whether to use a rule (following the plain meaning of the contract) or a standard (figuring out what the parties probably intended) is how quickly and inexpensively a system can adapt to correct errors. The faster a system can react to correct errors, the less disruption errors will cause.

Traditionally, errors are discovered years after a contract or rule has been devised, when a shrewd and aggressive investor spots an opportunity for advantage and acts on it. Once the error is exposed and publicized, market-participants can then adjust contract terms going forward. However, the party that found the creative reading can potentially capture a great deal of value. To the extent that the contractual provisions at issue have been used across the industry in other outstanding financial contracts which cannot be freely changed after the fact, others can engage in the same aggressive tactics without providing to the market the public service of identifying contractual errors. This may encourage over-investment in costly copycat litigation and under-investment in basic research to discover errors.

We propose an approach that would discover holes sooner (often before they are finalized), allocate more value to the act of error-spotting which provides dynamic benefits to financial markets, and allocate less value to copycat litigation that largely serves to add friction and costs to financial market contracts. Under our reform, an industry trade association, regulator, or other party with a stake in maintaining markets for certain kinds of financial products would offer a prize to market participants who detect and publicize flaws in rules so that problems can be quickly corrected.

This iterative approach works best when feedback loops are relatively short and when those who create and maintain the rules are capable of revis-

²³ See Sullivan, *supra* note 19e, at 62–63; Jonathan Nash, *On the Efficient Deployment of Rules and Standards to Define Federal Jurisdiction*, 65 VAND. L. REV. 509, 521–24 (2012).

²⁴ See Neal J. Roese & Kathleen D. Vohs, *Hindsight Bias*, 7 PERSP. ON PSYCH. SCI., 411, 411–12 (2012); Erin M. Harley, *Hindsight Bias in Legal Decision Making*, 25 SOC. COGNITION 48 (2007); Mark Kelman, David E. Fallas & Hillary Folger, *Decomposing Hindsight Bias*, 16 J. RISK AND UNCERTAINTY 251, 251–53 (1998); Amy Bradfield & Gary L. Wells, *Not the same old hindsight bias: Outcome information distorts a broad range of retrospective judgments*, 33 MEMORY & COGNITION 120, 120–21 (2005).

ing them quickly. These conditions likely apply in the context of commercial law. In this context, law firms, banks, trade associations, and self-regulatory organizations can swiftly revise the rules (e.g., the provisions of corporate bond indentures for new issuances, new loan agreement provisions, or derivatives contracts provisions). Self-regulatory organizations have deep expertise, reliable funding, and answer to a clearly delineated and technically sophisticated constituency.

Publicizing problems with the rules can encourage market participants and market-making intermediaries who do not exploit gaps in the rules to participate in the rule-improvement process. Those who do not exploit the rules may wish to improve them either so that they are not harmed directly by future exploitation of the rules, or to increase market confidence that financial instruments will perform as expected and intended. Market confidence and broader participation can benefit market-makers and intermediaries, whose revenue depends in part on volume.²⁵ By interpreting rules in light of their intent, courts encourage those harmed by exploitative strategies to challenge these strategies in court.²⁶ Whether or not plaintiffs prevail, such challenges and the publicity they generate facilitate subsequent rule revisions that ameliorate future problems while preserving the efficiency of a rules-based system.²⁷

Part I of this article explains how CDS work in greater detail, describes how and why regulation of CDS differs from other contracts that serve somewhat similar functions, and explores the dynamics surrounding Hovnanian. Part II looks at credit agreements and sets out the complicated transactions that J. Crew used to attempt to remove assets from the collateral package that it pledged to back its loan. Part III explains our proposal for a bounty-based system to detect contractual errors early.

I. CREDIT DEFAULTS SWAPS AND MANUFACTURED DEFAULTS

A. *Credit Default Swaps are used to bet on or hedge against defaults*

CDS permit sophisticated investors with opposing views of a business's (or government's) prospects of repaying its debts to bet against each other, typically anonymously through a dealer or network of dealers.²⁸ The trade association representing the dealers, and to a lesser extent, other market participants, is the International Swaps and Derivatives Association

²⁵ Howell E. Jackson & Mark J. Roe, *Public and Private Enforcement of Securities Laws: Resource-Based Evidence*, 93 J. FIN. ECON. 207–238 (2009); Christodoulos Stefanadis, *Self-Regulation, Innovation, and the Financial Industry*, 23 J. REG. ECON. 5–25 (2003).

²⁶ See Pierre Schlag, *Rules and Standards*, 33 UCLA L. REV. 379, 416–17 (1985).

²⁷ Sunstein, *supra* note 21, at 1006–07.

²⁸ Brendan Sapien, Book Note, *Financial Weapons of Mass Destruction: From Bucket Shops to Credit Default Swaps*, 19 S. CAL. INTERDISC. L.J. 411, 426 (2010).

(“ISDA”).²⁹ ISDA provides and maintains a standardized form contract (the ISDA Master Agreement), the terms of which can be customized through schedules.³⁰

CDS are often compared to insurance on bonds, but with lighter regulation.³¹ Like an insurance purchaser, a CDS protection buyer pays premiums to a protection seller in return for the possibility of a contingent payment.³² Like an insurance company, the protection seller must make a payment to the protection buyer only if a negative contingency materializes—specifically an event of default on debt of the entity that the parties are betting over, typically called the “reference entity.”³³ Like an insurance contract, there is a mechanism to determine how large this payment will be by estimating the damages incurred after a loss.

Phrased differently, one of the parties to the CDS contract, the protection seller, takes a long position, receiving premium payments during the life of a CDS in return for taking on the risk of loss if the reference entity defaults on its debt during the life of the CDS contract.³⁴ Similar to how an insurance company profits if there were no insurance claims during the term of insurance coverage or how a bondholder benefits if there were no defaults in the underlying debt, the protection seller profits by keeping the premiums if there is no default during the term of the CDS.

Insurance regulation has long required that beneficiaries of insurance must have an insurable interest—that is, that insurance may only operate as a hedge of existing risk to the party buying the insurance and not as a speculative bet on a negative event materializing.³⁵ Similarly, insurance companies seek to limit the amount of insurance so that if the negative contingency materializes, the payment to the beneficiary will typically be *less than* (or at least no more than) the resulting harm. This is achieved through deductibles, co-insurance, and limits on coverage. The purpose of these limitations is to prevent moral hazard—intentional misbehavior or negligence by the insured party that could cause damage to the property.³⁶ Such misbehavior to collect on the insurance is more likely if the insurance is more valuable to the insured than the property.³⁷

²⁹ *ISDA Membership*, INTERNATIONAL SWAPS AND DERIVATIVES ASSOCIATION, <https://www.isda.org/membership/> (last visited Aug 1, 2018).

³⁰ Gelper & Gulati, *CDS Zombies*, EUR. BUS. ORG. L. REV. 347, 356–57 (2012).

³¹ *Id.* at 360.

³² *Id.*

³³ *Id.* at 369.

³⁴ The most liquidly traded tenor (or life of the contract) is five years, although there are contracts for one year and other periods.

³⁵ Edwin W. Patterson, *Insurable Interest in Life*, 18 COLUM. L. REV. 381–421 (1918); John M. Stockton, *An Analysis of Insurable Interest under Article Two of the Uniform Commercial Code*, 17 VAND. L. REV. 815–834 (1963); Jacob Loshin, *Insurance Law's Hapless Busybody: A Case Against the Insurable Interest Requirement*, 117 YALE L.J. 474 (2007).

³⁶ Artur Raviv, *The Design of an Optimal Insurance Policy*, 69 AM. ECON. REV. 84–96 (1979); Loshin, *supra* note 35, at 476–77.

³⁷ Loshin, *supra* note 35, at 476–77.

CDS contracts do not require a protection buyer to have an “insurable interest.” This means that a CDS “protection buyer”—unlike an insured under an insurance contract—does not have to own any debt of the reference entity.³⁸ The CDS protection buyer can instead engage in naked shorting, betting on the financial condition of the debtor deteriorating to the point where it is likely to default on its debt and at least some of its creditors are likely to incur losses.³⁹

This lack of an interest in the reference entity is by design. CDS serve another function which has little to do with insurance—they enable investors whose research and analysis leads them to conclude that some companies are good credit risks and other entities are bad credit risks to monetize their research, not only by investing in good credit risks, but also by shorting bad credit risks.⁴⁰ In addition to rewarding investment in research and analysis, this makes markets more “complete” and in theory improves the price signal provided by financial markets.⁴¹ In this way, CDS are similar to short selling a stock when the investor does not own the underlying security. Indeed, an investor that doubts the financial wherewithal of a business may well buy protection and short the stock at the same time, all the while having no direct investment in the company.

Without CDS, it would be difficult to short a reference entity’s debt. The investor seeking to wager on default would have to find a bondholder of the reference entity who was willing to lend it its bonds so that it could sell them today. In exchange, the former bondholder would receive (and have to trust) a promise to return identical bonds at a future, specified date. This would be logistically challenging because bond ownership is often widely disbursed, ownership information is difficult to ascertain, and bond markets are generally less liquid than equity markets.⁴² Transaction costs would therefore be high,⁴³ and the potential short position might still be limited. While it is possible to bet against a company by shorting its equity, equity

³⁸ Gelpem & Gulati, *supra* note 30, at 360; CHRISTOPHER L. CULP, ANDRIA VAN DER MERWE & BETTINA J. STÄRKLE, *Single-Name CDSs*, in CREDIT DEFAULT SWAPS 144–45 (2018).

³⁹ Eric Posner & E. Glen Weyl, *An FDA for Financial Innovation: Applying the Insurable Interest Doctrine to Twenty-First-Century Financial Markets*, 107 Nw. U. L. REV. 1307–1358, 1332–1335 (2013); CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 151.

⁴⁰ CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 151.

⁴¹ Michael Simkovic, *Making Fraudulent Transfer Law More Predictable*, in HANDBOOK ON BANKRUPTCY (Barty E. Adler ed., 2019), <http://ssrn.com/abstract=2775920>; Michael Simkovic & Benjamin S. Kaminetzky, *Leveraged Buyout Bankruptcies, the Problem of Hind-sight Bias, and the Credit Default Swap Solution*, 2011 COLUM. BUS. L. REV. 118, 177 (2011); Mark D. Flood, *An Introduction to Complete Markets*, 7 FED. RES. BANK ST. LOUIS REV. 32, 34 (1991).

⁴² Nils Friewald, Rainer Jankowitsch & Marti G. Subrahmanyam, *Illiquidity or Credit Deterioration: A Study of Liquidity in the Us Corporate Bond Market During Financial Crises*, 105 J. FIN. ECON. 18, 35 (2012); Martin Oehmke & Adam Zawadowski, *The Anatomy of the CDS Market*, 30 REV. FIN. STUD. 80, 81 (2016).

⁴³ Oehmke & Zawadowski, *supra* note 39, at 81.

provides a very noisy signal for credit-worthiness because equity can benefit from actions that hurt debt holders and vice versa.⁴⁴

CDS solve the problem by effectively creating a “synthetic” bond of the reference entity, with the protection seller receiving long exposure (similar to the exposure he would receive if he sold treasuries to buy bonds of the reference entity), and the protection buyer receiving short exposure (similar to if he borrowed bonds, sold them, and then attempted to repurchase them later at a lower price).⁴⁵

1. Mechanisms for determining CDS payouts in the event of default are imperfect

The potential amount of money at stake in the CDS market is not limited by the amount of debt outstanding of the reference entity.⁴⁶ Two parties, neither with an interest in the reference entity, can enter into a CDS. Thus, the notional value (or even the market value) of side bets in the CDS market can be worth far more than the total debt of the reference entity.⁴⁷

Problems arise after a credit event has occurred. When CDS contracts were first introduced, they were physically-settled, meaning that after a credit event occurred, a protection buyer would deliver a bond of the reference entity to the protection seller, and the protection seller would then pay the protection buyer the face value of the bond.⁴⁸ The protection seller would be left with the defaulted bond. Post-default, bonds would typically be worth substantially less than 100 cents on the dollar, thus the protection buyer would be made whole and the protection seller would absorb the losses from the decline in the value of the bond.⁴⁹

However, physical settlement led to short-squeezes when there were more CDS contracts in need of settlements than there were reference entity bonds available.⁵⁰ To be paid 100 cents on the dollar, CDS protection buyers were obligated to deliver a bond of the reference entity. That was easy enough to do when someone already holding the bond of the reference entity bought the CDS as a hedge. But when the protection buyer was speculating on the company’s decline, it did not have bonds on hand to deliver.⁵¹ Protection buyers (short sellers) would therefore have to go into the market and

⁴⁴ Michael Simkovic & Benjamin S. Kaminetzky, *Leveraged Buyout Bankruptcies, the Problem of Hindsight Bias, and the Credit Default Swap Solution*, 2011 COLUM. BUS. L. REV. 118, 164–65 (2011); Douglas G. Baird & Robert K. Rasmussen, *Chapter 11 at Twilight*, 56 STANFORD LAW REVIEW 673 (2003); Clifford W. Smith & Jerold B. Warner, *On Financial Contracting: An Analysis of Bond Covenants*, 7 J. FIN. ECON. 117, 118–19 (1979).

⁴⁵ CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 145.

⁴⁶ Oehmke & Zawadowski, *supra* note 39, at 81.

⁴⁷ *See id.* at 81–82.

⁴⁸ CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 30.

⁴⁹ *Id.*

⁵⁰ *Id.* at 31–37.

⁵¹ *See id.* at 31–32.

buy reference entity bonds to collect on their CDS contracts.⁵² In theory, protection buyers should have been willing to pay up to 100 cents on the dollar—the value of collecting on the CDS contract.⁵³ Thus, competing protection buyers bid up the price of the bonds (above their “true” value in the absence of a CDS payout) and thereby reduced the value of the protection that each of them received through CDS contract settlement.⁵⁴ The value of CDS protection effectively depended in part on the total amount of CDS written relative to the amount of the reference entity’s outstanding unsecured debt.⁵⁵

When physical settlement became impractical, the drafters of CDS contracts turned to auctions to derive a reference price. An auction can avoid a short squeeze because only a relatively small number of bonds need to be bought or sold to price all CDS contracts.⁵⁶ But the underlying problem—biased sampling of bond value—persists in a new form.⁵⁷ A very thin segment of the cash market can price a very large derivatives market.⁵⁸ Once an event of default has occurred, large CDS market participants have strong incentives to attempt to manipulate the auction in their favor, potentially making (or saving) more money by changing CDS pricing than they lose by over- or under-paying at the bond auction.⁵⁹ Because a relatively small number of bonds bought or sold at auction can price much more valuable CDS contracts, CDS market participants still have incentives to buy or sell bonds at the auction to manipulate the price that will be used to settle CDS contracts.⁶⁰

The auction rules are designed to mitigate the risk of manipulation through a two-stage process that empowers dealers and limits the influence of other market participants.⁶¹ In the first stage of the auction, dealers collectively set the range of prices that constitute “market” price.⁶² In the second stage of the auction, other CDS market participants participate and help fine-

⁵² See *id.*

⁵³ See *id.*

⁵⁴ See *id.*

⁵⁵ See *id.*

⁵⁶ *Id.* at 33–34.

⁵⁷ *Id.* at 37.

⁵⁸ Patrick Augustin, Marti G. Subrahmanyam, Dragon Yongjun Tang & Sarah Qian Wang, *Credit Default Swaps – A Survey*, 9 FOUND. & TRENDS FIN., 1, 24–29 (2014).

⁵⁹ *Id.*

⁶⁰ CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 36–37.

⁶¹ Augustin, Subrahmanyam, Tang & Wang, *supra* note 58, at 26. Dealers may be viewed as more reliable and trustworthy than other market participants because dealers often act as intermediaries and are therefore close to neutral in their own CDS position. Dealers often earn a profit through the bid-ask spread and related fees driven by trading volume rather than through directional bets, although they can, and sometimes do, take directional positions. Michael Simkovic & Miao Ben Zhang, *Measuring Regulation* (USC CLASS Research Papers Series No. CLASS 19–22) 25 (2019), <https://papers.ssrn.com/abstract=3205589> (finding that Dodd-Frank limits on proprietary trading were likely not fully enforceable).

⁶² CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 34.

tune the price within the range of prices set in the first stage.⁶³ Although auction participants can bid outside the range of prices set in the first stage, submitting off-market bids incurs substantial financial penalties.⁶⁴

In spite of these efforts to constrain manipulation, several empirical studies have found evidence of possible mispricing of bonds at CDS settlement auctions.⁶⁵ These studies compared the bonds' prices at auction to their values before and after the auction.⁶⁶ These studies attribute the mispricing in part to strategic bidding at the auction and efforts to manipulate CDS settlement prices.⁶⁷ Similar concerns exist whenever a thin market is used to price a large number of thinly traded assets.

2. Small differences in the timing of default can dramatically alter the value of CDS

The value of CDS contracts is discontinuous because there is only a payout to CDS protection buyers *if* an event of default occurs prior to expiration of the CDS contract.⁶⁸ Thus, those with large positions in the CDS market also have incentives to trigger a default before the expiration of a CDS contract, or to help prevent a default until after the CDS contract expires.⁶⁹ There have been previous examples of CDS protection buyers encouraging a small technical default in order to trigger a CDS payout, such as in iHeart and Codere SA.⁷⁰ Incentives for CDS market participants to trigger defaults (or avoid them) are usually strongest when the potential value of the CDS contract is highest because the reference entity is financially distressed and

⁶³ *Id.*

⁶⁴ *Id.*

⁶⁵ CULP, MERWE & STÄRKLE, *supra* note 38, at 37; Robert Jarrow, Haitao Li, Xiaoxia Ye & May Hu, *Exploring Mispricing in the Term Structure of CDS Spreads*, 23 REV. FIN. 161, 189–90 (2019); cf. Dragon Yongjun Tang & Hong Yan, *Understanding Transactions Prices in the Credit Default Swaps Market*, 32 J. FIN. MKT 1, 1–27 (2017).

⁶⁶ Augustin, Subrahmanyam, Tang & Wang, *supra* note 58, at 27–28.

⁶⁷ *Id.*

⁶⁸ Roberto Blanco, Simon Brennan & Ian W. Marsh, *An Empirical Analysis of the Dynamic Relation Between Investment-Grade Bonds and Credit Default Swaps*, 60 J. FIN. 2255, 2257 (2005); see also Gelpert & Gulati, *supra* note 30, at 360.

⁶⁹ See Anthony R.G. Nolan & Han Li, *By Indirections Find Directions Out: Credit Default Swaps and the Hovnanian Exchange Offer*, K&L GATES (June 1, 2018), <http://www.klgates.com/by-indirections-find-directions-out-credit-default-swaps-and-the-hovnanian-exchange-offer-05-31-2018/>.

⁷⁰ Fabien Carruzzo, Stephen Zide & Daniel King, *iHeart and Other Unconventional CDS Credit Events*, PRAC. L. FIN. (2017), <https://www.kramerlevin.com/images/content/2/5/v4/2551/iHeart-20and-20Other-20Unconventional-20CDS-20Credit-20Events.pdf>. There are also concerns about the possibility of “orphaning”—of retiring the debt of a reference entity and borrowing through another related entity to make a default by the reference entity impossible. Mary Childs, *Can the Credit-Default-Swap Market Be Fixed?*, BARRON'S (June 8, 2018), <https://www.barrons.com/articles/can-the-credit-default-swap-market-be-fixed-1528489730>; Robert Smith, *Credit Default Swaps: A \$10tn Market That Leaves Few Happy*, FIN. TIMES (July 24, 2017), <https://www.ft.com/content/10af64da-7075-11e7-93ff-99f383b09ff9>.

the value of its bonds is therefore depressed.⁷¹ Forcing a default by a fiscally strong company is of little benefit because the bonds will price at close to par, thus providing minimal payout on the CDS.

In other markets that facilitate speculation, there are rules intended to prevent side bets from influencing behavior in the underlying market in undesirable ways. For example, managers—who owe fiduciary duties to shareholders—cannot short the equity of the firms they manage,⁷² and professional athletes are not permitted to bet against their own teams.⁷³

In equity and bond markets, rules against side-deals that create conflicts of interest are meant to protect *cash markets* (equity and bonds investors) from derivatives markets. However, the rules against side-deals are not designed to protect derivative market participants from activities that benefit cash markets participants.

B. GSO and Hovnanian severed the link between the financial condition of a reference entity and the value of CDS

The credit spread reflects both the likelihood of a corporate debtor defaulting on its debts and the losses that creditors will incur in the event of default.⁷⁴ The credit spread is the difference between the yield of bonds of the debtor and a risk-free rate of interest with a similar term structure—that is, an interest-bearing instrument where there is (approximately) no risk of default but where there is still risk that interest rates might change.⁷⁵ The implied spread on CDS contracts of a reference entity is typically close to the credit spread on the reference entity's bonds of a similar maturity.⁷⁶ Credit spreads derived from bonds and CDS premiums (and upfront fees) are

⁷¹ See Patrick Bolton & Martin Oehmke, *Credit Default Swaps and the Empty Creditor Problem*, 24 REV. FIN. STUD. 2617, 2631–39 (2011).

⁷² See Qiang Cheng & Terry D. Warfield, *Equity Incentives and Earnings Management*, 80 ACCT. REV. 441, 442 (2005).

⁷³ Chuck Klosterman, *What if an Athlete Wants to Bet on Himself?*, N.Y. TIMES (Nov. 14, 2014), <https://www.nytimes.com/2014/11/16/magazine/what-if-an-athlete-wants-to-bet-on-himself.html>.

⁷⁴ Lawrence Fisher, *Determinants of Risk Premiums on Corporate Bonds*, 67 J. POL. ECON. 217, 217 (1959) (hypothesizing that the difference between the market yield on the bond and the risk-free rate “depends first on the risk that the firm will default on its bonds and second on their marketability”); Robert C. Merton, *On the Pricing of Corporate Debt: The Risk Structure of Interest Rates*, 29 J. FIN. 449, 449 (1974); Simkovic & Kaminitzky, *supra* note 12, at 170.

⁷⁵ By convention, for U.S. denominated assets, the risk-free rate is typically approximated as the yield on US Treasuries or (slightly higher) LIBOR rates. U.S. treasury rates are typically used as the risk-free rate for corporate bonds, while LIBOR is typically used as the risk-free rate for CDS. Terms structure refers to maturity date and date of payments. Thus, for a corporate bond maturing on February 2024, one could approximate the credit spread using the yield on a treasury note maturing on approximately the same date as the risk-free rate.

⁷⁶ John Hull, Mirela Predescu & Alan White, *The Relationship Between Credit Default Swap Spreads, Bond Yields, and Credit Rating Announcements*, 28 J. BANKING FIN. 2789, 2792 (2004) (“CDS spreads . . . are already credit spreads.”); Simkovic & Kaminitzky, *supra* note 12, at 190–91.

believed to reflect credit market and derivative market participants' respective perceptions of the creditworthiness of the debtor.⁷⁷ Bond spreads and CDS spreads generally move together and are similar in level.⁷⁸

As noted above, an investor seeking to hedge against credit risk could sell corporate bonds of the reference entity and use the proceeds to buy treasuries instead of buying CDS to cover corporate bond holdings.⁷⁹ Selling corporate bonds and buying treasuries eliminates exposure to credit risk, just as buying CDS hedges that risk. Therefore, the value of these two approaches should be approximately equal.⁸⁰

Many of those who are familiar with these typical attributes of CDS were surprised when a hedge fund, GSO Capital Partners, managed to sever the link between the value of CDS contracts and the creditworthiness of the reference entity.⁸¹

Unbeknownst to Hovnanian's management team, various parties were making bets on its future via CDS. On one side were those whose research suggested that the company would not default on its obligations prior to the expiration of the CDS contract or the maturity of outstanding bonds. To take this position, long investors bought both actual bonds that the company had issued and synthetic bonds by selling CDS protection. Others expected Hovnanian to default. To monetize this prediction, they purchased CDS protection.

At some point, Hovnanian's management learned of the respective wagers on the company's future. Hovnanian eventually reached a deal whereby it would engineer a technical default in exchange for favorable financing.⁸² Under the terms of this deal, Hovnanian refinanced its outstanding debt through an exchange offer in which existing debt was exchanged for some cash and two new bond issuances.⁸³ Although the weighted average coupon rate of the new bonds was slightly higher than the interest rate Hovnanian was paying prior to the exchange, the maturity was substantially longer, giving the company more time to repay its debts.⁸⁴ This offer was more attractive than any rival refinancing offer Hovnanian was able to obtain in the market.⁸⁵ The exchange offer reduced the firm's weighted average cost of capital, increased the firm's value, and was attractive to Hovnanian share-

⁷⁷ Simkovic & Kaminetzky, *supra* note 12, at 166–67.

⁷⁸ There are exceptions related to taxes, liquidity, risk premiums, and the speed with which information updates in CDS versus bond markets.

⁷⁹ Blanco, Brennan, & Marsh, *supra* note 68, at 2259.

⁸⁰ *See id.*

⁸¹ *See* CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 50–59.

⁸² *See id.* at 50–59.

⁸³ *Id.* at 52.

⁸⁴ Amended Complaint, Solus Alt. Asset Mgmt. LP v. GSO Capital Partners LP, 18-CV-232-LTS-BCM, at *21, 25–26 (S.D.N.Y. Feb 1, 2018).

⁸⁵ Matt Levine, *Blackstone May Do Its Cleverest CDS Trade Again*, BLOOMBERG (November 17, 2017), <https://www.bloomberg.com/view/articles/2017-11-17/blackstone-may-do-its-cleverest-cds-trade-again>.

holders to whom Hovnanian management owed fiduciary duties.⁸⁶ Indeed, the offer was also attractive to many of Hovnanian's other creditors, who stood to benefit from the company's improved creditworthiness.

GSO backstopped the exchange offer and benefited by attaching unusual conditions that dramatically increased the value of GSO's position as a CDS protection buyer.⁸⁷ One of the two new bonds Hovnanian issued was very unconventional. The new bond carried an extremely long and unconventional maturity (twenty-two years) and an extremely low coupon rate (5%).⁸⁸ The coupon rate was actually lower than the other Hovnanian bond issued in the same exchange, even though the other bond matured sooner.⁸⁹ But as maturities increase in length, interest rates typically rise.⁹⁰ This correlation between interest rates and maturity is known as the "upward sloping yield curve."⁹¹

At issuance, bonds' coupon rates are usually set close to their expected market yield so that the bonds will trade at close to par (close to 100 cents on the dollar).⁹² But because the twenty-two-year bond's coupon was so low relative to the market, the original value of the bond was far below par—allegedly around 35 to 50 cents on the dollar.⁹³ At the time, most of Hovnanian's debt was trading at yields that suggested that creditors anticipated recovering far more than 50 cents on the dollar in the event of a Hovnanian default.⁹⁴

GSO proposed the creation of this atypical instrument as a way to boost its recovery on the CDS that it held. Recall that CDS are settled through an auction process based on purchases and sales of the cheapest-to-deliver bond. The cheaper the bond, the more the CDS holder recovers. Because the twenty-two-year bond immediately *became* the cheapest-to-deliver bond, the twenty-two-year bond could effectively set the payout on CDS contracts

⁸⁶ See CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 52–59.

⁸⁷ See *id.* at 52–59.

⁸⁸ *A Bondholder Finds a Sneaky Way to Trigger Insurance Against Default*, THE ECONOMIST (May 3, 2018), <https://www.economist.com/finance-and-economics/2018/05/03/a-bondholder-finds-a-sneaky-way-to-trigger-insurance-against-default>; CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 51.

⁸⁹ CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 51–52.

⁹⁰ Jean Helwege & Christopher M. Turner, *The Slope of the Credit Yield Curve for Speculative-Grade Issuers*, 54 J. FIN. 1869, 1883 (1999); Michael Simkovic, *Paving the Way for the Next Financial Crisis*, 29 BANK. & FIN. SERVICES POL'Y REP. 1, 6 (2010).

⁹¹ *Id.* at 15.

⁹² ROBERT L. McDONALD, DERIVATIVES MARKETS, 195 (Donna Battista et al. eds., 3rd ed. 2013).

⁹³ See CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 54; Memorandum of Law in Support of Plaintiff's Motion for a Preliminary Injunction, Solus Alt. Asset Mgmt. v. GSO Capital Partners, 18-CV-232-LTS-BCM, 2018 WL 661646, at *6 (S.D.N.Y., Jan. 11, 2018) (citing Hambrook Declaration). The 22-year bond was called a "rigged bond" by plaintiffs challenging the transaction.

⁹⁴ Declaration of Robert D. Selvaggio in Opposition to Plaintiff's Motion for Preliminary Injunction, Solus Alt. Asset Mgmt. v. GSO Capital Partners, 18-CV-00232, at *9 (S.D.N.Y. Feb. 9, 2018).

referencing Hovnanian at 35 to 50 cents on the dollar.⁹⁵ By creating a cheapest-to-deliver security that was undervalued relative to the weighted average value of Hovnanian's debt, the payout to CDS protection buyers in the event of a Hovnanian default dramatically increased.⁹⁶ The value of this bond, and therefore the value of Hovnanian CDS contracts, became disconnected from the overall creditworthiness of Hovnanian.

GSO had one more problem to solve to ensure that it would receive a payout. CDS contracts only pay out to protection buyers if an event of default occurs prior to the expiration of the CDS contract.⁹⁷ Given that the Hovnanian refinancing extended debt maturities and lowered Hovnanian's cost of capital, a default within the relevant window became *less likely*.

Investors typically assume that a reference entity like Hovnanian will not intentionally default because credit events tend to be costly to the reference entity. A default on one obligation usually causes defaults on most outstanding obligations through cross-default provisions that are standard fare.⁹⁸ If a cross-default was triggered, Hovnanian's installment debt could be accelerated, which would force Hovnanian to either refinance more debt or file bankruptcy, both of which are costly propositions.⁹⁹

To enable Hovnanian to provide an event of default, GSO and Hovnanian needed to find a way to trigger an event of default *without* triggering cross-default provisions in other notes and financings. To accomplish this, GSO required Hovnanian to agree to default on a small amount of Hovnanian debt held by one of Hovnanian's wholly-owned subsidiaries.¹⁰⁰ Effectively, Hovnanian declined to pay itself.¹⁰¹ Hovnanian would skip an interest payment to its affiliate equal to just over \$1 million.¹⁰² This amount was just over the minimum threshold required for a CDS event of default, but below the amount that could trigger cross-default provisions on Hovnanian's other debt.¹⁰³ By skipping a debt payment to its own subsidiary, Hovnanian could

⁹⁵ See Anthony Nolan & Hilda Li, *Credit Default Swaps and the Hovnanian Exchange Offer*, LAW 360 (June 6, 2018), <https://www.law360.com/articles/1050592/credit-default-swaps-and-the-hovnanian-exchange-offer>.

⁹⁶ Fabien Carruzzo, Daniel King & Stephen Zide, *Unconventional CDS Credit Events: Hovnanian Enterprises*, JD SUPRA (March 29, 2018), <https://www.jdsupra.com/legalnews/unconventional-cds-credit-events-86258/>; see also Nolan & Li, *supra* note 95.

⁹⁷ Blanco, Brennan & Marsh, *supra* note 68, at 2257.

⁹⁸ Paul D. Childs, Steven H. Ott & Timothy J. Riddiough, *The Value of Recourse and Cross-Default Clauses in Commercial Mortgage Contracting*, 20 J. BANKING & FIN. 511, 512 (1996); Stephen R. Krufft, *Cross-Default Provisions in Financing and Derivatives Transactions*, BANKING L.J. 216, 219 (1996).

⁹⁹ Carruzzo, King & Zide, *supra* note 70, at 5.

¹⁰⁰ CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 54; CARRUZZO, KING & ZIDE, *supra* note 96, at 2.

¹⁰¹ See CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 53–54.

¹⁰² Carruzzo, King & Zide, *supra* note 70, at 2–3.

¹⁰³ Carruzzo, King & Zide, *supra* note 96.

also be certain that its creditor would not sue or pursue other remedies that could damage Hovnanian.¹⁰⁴

GSO and Hovnanian effectively manufactured a way for Hovnanian to default for purposes of triggering a CDS settlement auction, but not default with respect to any of its non-affiliated creditors.¹⁰⁵ Hovnanian simply decided not to transfer money from one of its pockets to the other. Thus, Hovnanian could trigger a high CDS payout for GSO with minimal damage to Hovnanian.¹⁰⁶

As noted above, the deal was good for Hovnanian and its investors, and it was good for GSO. The biggest losers under the deal were CDS protection sellers who took positions opposite GSO.¹⁰⁷ These CDS protection sellers were effectively going long on Hovnanian—that is, they were betting that Hovnanian was creditworthy and either would not default on its debts during the term of the CDS contract or, in the event of default, would be able to pay its creditors most of what they were owed.¹⁰⁸ Ironically, a refinancing that improved Hovnanian’s financial position would prove very costly for those betting on its financial position improving.¹⁰⁹

1. Challenges to the GSO-Hovnanian deal structure

One of the largest CDS protection sellers, Solus Alternative Asset Management LP (“Solus”), stood to lose more than \$60 million on its CDS position and subsequently sued GSO and Hovnanian in connection with the transaction, alleging market manipulation and fraud under securities laws and tortious interference with contractual rights.¹¹⁰ First, Solus unsuccessfully sought an injunction to block the exchange offer.¹¹¹ Next, Solus unsuccessfully lobbied the ISDA to issue a “clarification” of its rules that would prevent GSO’s trade from succeeding.¹¹² Solus also unsuccessfully lobbied the Securities and Exchange Commission—which regulates the single-name CDS market, as well as equity and bond markets—to intervene.¹¹³

¹⁰⁴ Matt Levine, *Not Everyone Appreciates CDS Creativity*, BLOOMBERG (Jan. 18, 2018), <https://www.bloomberg.com/view/articles/2018-01-18/not-everyone-appreciates-cds-creativity>.

¹⁰⁵ Carruzzo, King & Zide, *supra* note 96.

¹⁰⁶ See Levine, *supra* note 104.

¹⁰⁷ Complaint, Solus Alt. Asset Mgmt. LP v. GSO Capital Partners LP (S.D.N.Y., Jan. 11, 2018).

¹⁰⁸ See *id.* at 12, 14.

¹⁰⁹ See Levine, *supra* note 104.

¹¹⁰ Complaint, Solus v. GSO, *supra* note 107, at 8–9.

¹¹¹ Solus Alt. Asset Mgmt. LP v. GSO Capital Partners L.P., No. 18-CV-232-LTS-BCM, 2018 WL 620490 (S.D.N.Y. Jan. 29, 2018).

¹¹² Erik Schatzker & Sridhar Natarajan, *Solus Says It May Buy Hovnanian Bonds to Cut Loss From CDS*, BLOOMBERG (April 11, 2018), <https://www.bloomberg.com/news/articles/2018-04-11/solus-says-it-may-buy-hovnanian-bonds-to-cut-loss-from-gso-trade>.

¹¹³ The CFTC, which does not regulate single name CDS, made a statement while the SEC, which does, remained silent. NOLAN, *supra* note 68.

Meanwhile, leadership at GSO maintained that the trade was legally permissible under extant rules.¹¹⁴ However, GSO conceded that if its trade exposed flaws in the rules governing CDS contracts, then ISDA should consider revising those rules.¹¹⁵

Although Solus's legal challenges were largely unsuccessful, Solus found a variety of ways to pressure GSO and its parent Blackstone that may have contributed to a more favorable settlement.¹¹⁶ Solus hired a media consultant and provided information to the press that led to a series of scathing articles and interviews describing the trade as a threat to the integrity of the CDS market, and as "unseemly."¹¹⁷

The U.S. Commodity Futures Trading Commission (CFTC), which regulates multi-name index CDS but does not have jurisdiction over single-name CDS, issued a press release indicating that it was concerned that the transaction might constitute market manipulation.¹¹⁸ Although Hovnanian was one of 100 names referenced by a CDS index,¹¹⁹ the impact of the Hovnanian trade on the price of this index was likely minimal. However, the CFTC has regulatory oversight over many markets that are important to Blackstone's business, and thus its expression of disapproval may have increased GSO's willingness to settle.¹²⁰

Finally, senior leadership at Solus publicly expressed its willingness to bid up the price of the twenty-two-year bonds to limit payouts under the CDS contract, even at the potential cost of hundreds of millions of dollars.¹²¹

Under the terms of the confidential settlement agreement, GSO and Solus agreed to allow Hovnanian to cure the missed payment on its debt before it became an event of default triggering a CDS payout.¹²² In exchange, Solus

¹¹⁴ Sridhar Natarajan & Erik Schatzker, *GSO's Goodman Backs Closing CDS Loophole That His Firm Mastered*, BLOOMBERG BUSINESS (March 9, 2018), <https://www.bloomberg.com/news/articles/2018-03-09/gso-s-goodman-backs-closing-cds-loophole-that-his-firm-mastered>; CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 55.

¹¹⁵ Natarajan & Schatzker, *supra* note 114.

¹¹⁶ Gabriel T. Rubin & Andrew Scurria, *How Regulators Averted a Debacle in Credit-Default Swaps*, WALL STREET JOURNAL, July 8, 2018, <http://archive.is/NE6JG> (last visited Jul 24, 2018).

¹¹⁷ Katherine Doherty, *Canyon's Friedman Laments GSO's 'Unseemly' Hovnanian Swaps Deal*, BLOOMBERG NEWS (April 30, 2018), <https://www.bnnbloomberg.ca/canyon-s-friedman-laments-gso-s-unseemly-hovnanian-swaps-deal-1.1069130>.

¹¹⁸ Statement on Manufactured Credit Events by CFTC Divisions of Clearing and Risk, Market Oversight, and Swap Dealer and Intermediary Oversight, U.S. COMMODITY FUTURES TRADING COMMISSION (April 24, 2018), <https://www.cftc.gov/PressRoom/SpeechesTestimony/divisionsstatement042418> (last visited Jul 23, 2018).

¹¹⁹ Complaint, *Solus v. GSO*, *supra* note 107, at 31.

¹²⁰ Rubin & Scurria, *supra* note 118. Following the settlement, the traders at GSO who engineered the Hovnanian deal left GSO for another hedge fund that is unaffiliated with Blackstone. Childs, *supra* note 70.

¹²¹ Schatzker & Natarajan, *supra* note 114.

¹²² Andrew Scurria, *Blackstone Stands Down on Hovnanian Swaps Wager*, WALL ST. J., (May 30, 2018), <https://www.wsj.com/articles/blackstone-stands-down-on-hovnanian-swaps-wager-1527722945>.

reportedly compensated GSO.¹²³ Thus, although Solus's challenges to the trade probably limited GSO's profits and Solus's losses, the trade was still likely profitable for GSO.¹²⁴

Following the settlement between GSO, Hovnanian, and Solus, ISDA began considering a variety of proposals to make similar trades less likely in the future.¹²⁵ These proposals included introducing some degree of subjectivity into definitions of credit events, such that a default or failure to pay would have to be due to a deterioration in the reference entity's creditworthiness.¹²⁶ While the new language admittedly required judgment, ISDA opined that such uncertainty was actually helpful in that it would deter parties from creating manufactured defaults.

2. Why the GSO-Hovnanian deal was legally permissible

CDS protection sellers take a long position in the reference entity—that is, they bet on the reference entity's financial condition improving.¹²⁷ They are not, however, investors in the reference entity, such as shareholders who are owed fiduciary duties, or bondholders who have contractual rights under bond indentures.¹²⁸ The terms of these contracts are mainly governed by ISDA Master Agreements.¹²⁹

¹²³ *Id.*

¹²⁴ *See id.*

¹²⁵ Press Release, ISDA, ISDA Board Statement on Narrowly Tailored Credit Events (Apr. 11, 2018), <https://www.isda.org/2018/04/11/isda-board-statement-on-narrowly-tailored-credit-events/>; Childs, *supra* note 70.

¹²⁶ Proposed Amendments to the 2014 ISDA Credit Derivatives Definitions Relating to Narrowly Tailored Credit Events, ISDA (March 6, 2019), [isda.org/a/nyKME/20190306-NTCE-consultation-doc-complete.pdf](https://www.isda.org/a/nyKME/20190306-NTCE-consultation-doc-complete.pdf).

¹²⁷ Giulio Girardi, Craig Lewis & Mila Getmansky, *Interconnectedness in the CDS Market*, VAND. OWEN GRADUATE SCH. OF MGMT. RES. PAPER, 5 (2014).

¹²⁸ Technically, creditors may also be owed fiduciary duties once a debtor becomes insolvent, but recent court decisions have largely hollowed out such protections in favor of a contractarian approach. Fiduciary duties to creditors can be used to shield managers from liability to shareholders for actions taken while the firm is insolvent, but such fiduciary duties will rarely make managers liable to creditors. *Quadrant Structured Prod. Co., Ltd. v. Vertin*, No. CV 6990-VCL, 2015 WL 6157759, at *10–11 (Del. Ch. Oct. 20, 2015), *aff'd*, No. 210, 2016, 2016 WL 6438209 (Del. Oct. 31, 2016); *Quadrant Structured Prod. Co. v. Vertin*, 102 A.3d 155, 185–87 (Del. Ch. 2014), *reconsideration denied*, No. CIV.A. 6990-VCL, 2014 WL 5465535 (Del. Ch. Oct. 28, 2014); *Prod. Res. Gp., L.L.C. v. NCT Gp., Inc.*, 863 A.2d 772, 790 (Del. Ch. 2004); *Trenwick Am. Litig. Tr. v. Ernst & Young, L.L.P.*, 906 A.2d 168, 199 (Del. Ch. 2006), *aff'd sub nom*; *Trenwick Am. Litig. Tr. v. Billett*, 931 A.2d 438 (Del. 2007).

Case law creating potential liability in the “zone of insolvency” has largely also been reversed—fiduciary duties to creditors now attach at insolvency, not prior, at least in Delaware. *N. Am. Catholic Educ. Programming Found., Inc. v. Rob Gheewalla*, No. CIV.A. 1456-N, 2006 WL 2588971, at *13 (Del. Ch. Sept. 1, 2006), *aff'd sub nom*; *N. Am. Catholic Educ. Programming Found., Inc. v. Gheewalla*, 930 A.2d 92 (Del. 2007).

¹²⁹ Augustin, Subrahmanyam, Tang & Wang, *supra* note 58, at 8.

The ISDA Master Agreement gives CDS counterparties substantial leeway to interact with the reference entity as they see fit.¹³⁰ Section 11.1(b)(iii) of the 2014 ISDA Definitions provides that each party to a CDS contract:

“[M]ay where permitted . . . make loans or otherwise extend credit to, and generally engage in any kind of commercial or investment banking or other business with, the Reference Entity . . . **and may act (but is not obliged to act) with respect to such business in the same manner as each of them would if such Credit Derivative Transaction did not exist**, regardless of whether any such action might have an adverse effect on the Reference Entity . . . (including, without limitation, any action which might constitute or give rise to a Credit Event).¹³¹”

The ostensible purpose of this provision is to permit lenders to hedge their exposure through CDS and then take a hardline position in negotiations with troubled borrowers without fear that contributing to a reference entity default could give rise to liability or limit recoveries under CDS contracts.¹³²

ISDA agreements have become more permissive with respect to interactions between CDS counterparties and reference entities over time. An earlier version of the provision above, Section 9.1(b)(iii) in the 2003 Definitions, did not include the language “but is not obliged to act.” Thus, post-2014, if incentives created by a CDS contract encourage a CDS counterparty to act toward a reference entity in a way that might encourage or prevent default, such actions by a CDS counterparty are permissible under the agreement between the CDS counterparties—the only contractual agreement governing the CDS.¹³³

While these provisions may not have specifically contemplated the complex strategy used by GSO, if the 2014 language insulates CDS counterparties from liability for triggering a default by taking a hardline with troubled borrowers,¹³⁴ it seems unlikely that it would impose liability on them for providing rescue financing on generous terms.

As a CDS protection seller, Solus did not have a contract-based claim against the protection buyer GSO;¹³⁵ indeed, the plain language of the contract absolved GSO of any liability for taking action that trigger a default. Solus’s relationship with Hovnanian was even more attenuated as it had

¹³⁰ See ROBERT PICKEL, DECLARATION OF ROBERT PICKEL 8 (2018).

¹³¹ *Id.* at 69.

¹³² See *id.* at 7–9.

¹³³ See Wenxin Du, Salil Gadgil, Michael B. Gordy & Clara Vega, *Counterparty Risk and Counterparty Choice in the Credit Default Swap Market*, FIN. AND ECON. DISCUSSION SERIES 2016-087, 4–6; see also CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 148–151.

¹³⁴ See CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 55–56.

¹³⁵ GSO and Solus likely both entered into contracts with CDS dealers rather than directly with each other, so contract-based claims would have an additional potential hurdle.

neither a contract with the reference entity nor was there a fiduciary relationship between them.¹³⁶

Because of these limitations, Solus challenged the transaction by alleging fraud and market manipulation under the securities laws,¹³⁷ and tortious interference with contract under state law.¹³⁸ Solus also relied heavily on policy arguments about the potential damage to the CDS market.¹³⁹ These claims were insufficient to convince the Southern District of New York to issue an injunction blocking the refinancing.¹⁴⁰ The court noted that CDS market participants were sophisticated investors,¹⁴¹ that any broader harm to the CDS market from “engineered defaults” could be mitigated by ISDA if it wished,¹⁴² and that any potential harm to Solus could be addressed through monetary damages rather than an injunction.¹⁴³

Solus repeated substantially similar claims in an effort to secure damages.¹⁴⁴ The tortious interference with contract claims are questionable because (1) GSO’s conduct was likely permissible under the ISDA Master Agreement governing CDS contracts, and (2) because although Hovnanian would breach a bond indenture by defaulting (even in a small technical default), it seems unlikely that there was much, if any, in the way of damages to Hovnanian’s bondholders.¹⁴⁵ Notably, Solus was both a Hovnanian bondholder and a CDS protection seller, but only suffered losses in its capacity as a CDS protection seller.¹⁴⁶

Although Solus’s claims regarding market manipulation and fraud under securities laws were stronger, GSO and Hovnanian had plausible arguments about why the elements of these causes of actions might not be met.¹⁴⁷

¹³⁶ Solus Alt. Asset Mgmt. LP v. GSO Capital Partners LP, No. 18-CV-232-LTS-BCM, 2018 WL 620490, at *7 (S.D.N.Y. Jan. 29, 2018).

¹³⁷ Memorandum of Law in Support of Plaintiff’s Motion for a Preliminary Injunction, Solus Alt. Asset Mgmt. vs. GSO Capital Partners, 18-CV-232-LTS-BCM, 2018 WL 661646, at *12–21 (S.D.N.Y., Jan. 11, 2018).

¹³⁸ *Id.*, at *11–12.

¹³⁹ *Id.*, at *10–11. Solus described the transaction as “a fundamental perversion of the CDS market that threatens its very existence” and as “an existential threat to the CDS market.”

¹⁴⁰ Solus Alt. Asset Mgmt. LP v. GSO Capital Partners LP, No. 18 CV 232-LTS-BCM, 2018 WL 620490, at *15 (S.D.N.Y. Jan. 29, 2018).

¹⁴¹ *Id.* at 5.

¹⁴² *Id.* at 9–10.

¹⁴³ *Id.* at 10–14.

¹⁴⁴ See Complaint, Solus v. GSO, *supra* note 107, at 48–49.

¹⁴⁵ See CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 55–56.

¹⁴⁶ Amended Complaint, *supra* note at 86, at *2–3; CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 55–56.

¹⁴⁷ See generally Memorandum of Law in Support of Motion to Dismiss Plaintiff’s Amended Complaint, Solus Alt. Asset Mgmt. LP v. GSO Capital Partners LP, No. 18-CV-232-LTS-BCM, 2018 WL 1182097 (S.D.N.Y. Mar. 2, 2018); Memorandum of Law in Support of GSO Capital Partners LP’s Motion to Dismiss the Amended Complaint, Solus Alternative Asset Mgmt. LP v. GSO Capital Partners LP, No. 18 CV 232-LTS-BCM, 2018 WL 1150498 (S.D.N.Y. Mar. 2, 2018).

Hovnanian did not trade its own CDS—it simply negotiated low-cost financing at the expense of third party CDS protection sellers.¹⁴⁸ There does not appear to have been any harm to Hovnanian’s shareholders or bondholders.¹⁴⁹ It is also unclear if there were any real deficiencies in Hovnanian’s disclosures with respect to the transaction—although Hovnanian made statements about its intent to repay its debts prior to engaging in the transaction with GSO, such statements may not have been misleading when made.¹⁵⁰

If statements about intent to repay debts were made contemporaneously with plans for the refinancing, then such statements could have been misleading. However, such statements might still not be *materially* misleading because Hovnanian’s default was a small technical default that facilitated a low-cost refinancing, which increased the likelihood of Hovnanian repaying most of its debts.¹⁵¹ Corporate reference entities are not professional sports teams bound by league rules and public expectations to try their best to win games rather than tanking seasons for strategically valuable first-round draft picks; if managers can arrange lower cost financing through minor technical defaults, most shareholders and other investors would welcome, or indeed *expect*, them to engage in such activities.¹⁵²

Hovnanian’s refinancing clearly affected the *value* of CDS contracts referencing Hovnanian in a way that most CDS market participants would not have anticipated.¹⁵³ But it is unclear whether an intentional technical default, or inducement to such action, is *per se* a manipulative or fraudulent act under federal securities laws.¹⁵⁴

The CFTC, which regulates multi-name index CDS (but not single name CDS), has strongly suggested that it believes the transaction was manipulative:¹⁵⁵

“Manufactured credit events may constitute market manipulation and may severely damage the integrity of the CDS markets, including markets for CDS index products, and the financial industry’s use of CDS valuations to assess the health of CDS reference entities. This would affect entities that the CFTC is responsible for overseeing, including dealers, traders, trading platforms, clearing houses, and market participants who rely on CDS to hedge risk. Market participants and their advisors are advised that in instances

¹⁴⁸ See Levine, *supra* note 85.

¹⁴⁹ See *id.*

¹⁵⁰ See Memorandum of Law in Support of Motion to Dismiss Plaintiff’s Amended Complaint, *supra* note 149, at *7–8 (S.D.N.Y. Mar. 2, 2018).

¹⁵¹ See *id.* at *6–8.

¹⁵² See Levine, *supra* note 85.

¹⁵³ See Mary Childs, *Trigger Warning: GSO’s Favorite Loophole in Danger*, BARRON’S (March 13, 2018) <https://www.barrons.com/articles/trigger-warning-gsos-favorite-loophole-in-danger-1520980654>.

¹⁵⁴ See *id.*

¹⁵⁵ Gabriel T. Rubin & Andrew Scurria, *How Regulators Averted a Debacle in Credit-Default Swaps*, WALL ST. J. (July 8, 2018), <http://archive.is/NE6JG>.

of manufactured credit events, the Divisions will carefully consider all available actions to help ensure market integrity and combat manipulation or fraud involving CDS, in coordination with our regulatory counterparts, when appropriate.”¹⁵⁶

The SEC, which regulates single name CDS, stocks, and bonds, did not take a position.¹⁵⁷

C. ISDA responds with prospective rule changes

Solus sought assurances from ISDA that ISDA’s Determination Committee would prevent the GSO-Hovnanian trade from succeeding.¹⁵⁸ ISDA could do this by “clarifying” its rules to disallow the twenty-two-year bond as a deliverable in the auction or by ruling that an intentional technical default was not a real event of default.¹⁵⁹ ISDA’s board shared Solus’s concerns about the negative impact that the Hovnanian GSO deal could have on the CDS market.¹⁶⁰

However, ISDA declined to make retrospective changes to the rules that would help Solus at GSO’s expense, and refused to move toward a standards-based, subjective approach.¹⁶¹ Thus, ISDA reaffirmed its commitment to a rule-based, prospective process. In response to concerns about the potential negative impact of narrowly-tailored defaults on the CDS market, ISDA “instructed the ISDA staff, as part of its ongoing dialogue with the market, to consult with market participants and advise the Board on whether further amendments to the ISDA Credit Derivatives Definitions should be considered.”¹⁶²

Thus, while ISDA would not support retroactive rule changes or subjective standards, it would support a prospective, rules-based solution to the problems highlighted by the Hovnanian transaction.¹⁶³ On March 6, 2019, ISDA circulated proposed changes to the standard CDS contract. The proposal would “add a requirement that the relevant payment failure result from

¹⁵⁶ U.S. COMMODITY FUTURES TRADING COMMISSION, *supra* note 118.

¹⁵⁷ Anthony R.G. Nolan & Hilda Li, *By Indirections Find Directions Out: Credit Default Swaps and the Hovnanian Exchange Offer*, K&L GATES (June 1, 2018), <http://www.klgates.com/by-indirections-find-directions-out-credit-default-swaps-and-the-hovnanian-exchange-offer-05-31-2018/>.

¹⁵⁸ Schatzker & Natarajan, *supra* note 114.

¹⁵⁹ CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 58–59.

¹⁶⁰ Press Release, ISDA, *supra* note 125 (“We believe that narrowly tailored defaults, those that are designed to result in CDS payments that do not reflect the creditworthiness of the underlying corporate borrower (the reference entity in the CDS), could negatively impact the efficiency, reliability and fairness of the overall CDS market.”).

¹⁶¹ *Id.* (“The credit event determination process does not allow the DC to make subjective decisions, or to consider the intent or good faith of the parties that put in place the arrangements leading to a potential credit event. This ensures the process is objective and predictable, and decisions can be made quickly.”).

¹⁶² See CULP, VAN DER MERWE & STÄRKLE, *supra* note 38, at 57–58.

¹⁶³ See Childs, *supra* note 70.

or in a deterioration in creditworthiness or financial condition of the Reference Entity.”¹⁶⁴ Recognizing that deciding the cause of a failure to pay is not susceptible to a clear rule, ISDA published a guidance memo that lists the factors that ISDA would consider when determining the cause of the default. The new definition would not only apply to future contracts, but would apply to existing contracts where the parties agreed to it. The message was unmistakable: ISDA, which is comprised of the participants in the industry, is committed to enforcing plain language of the Master Agreement. If industry participants want ISDA to make a more subjective determination, that desire needs to be reflected in the contract itself.

II. SYNDICATED LOAN AGREEMENTS AND BASKETS

Companies seeking financing often borrow from a group of lenders through a syndicated loan. Large companies may need to borrow hundreds of millions or even several billion dollars. If any individual lending institution fully funded such a loan by itself, it would be exposed to large losses from problems at a single client. Taking such undiversified risk would be imprudent,¹⁶⁵ and in some cases would be prohibited by regulations which limit the size of a loan that a bank can make to any single entity.¹⁶⁶ Selling parts of the loan to other investors also frees capital so that the bank can specialize in structuring and servicing large loans without tying up its capital in a small number of deals.¹⁶⁷

Over the past few decades, the solution to this problem has been the syndicated loan. In a syndicated loan, the lead bank negotiates the terms of the deal with the borrower. It reaches agreement on the amount of the loan, the price (within a range),¹⁶⁸ fees, and so on. After the deal is in place, the lead bank will then syndicate the loan by selling parts of the loan to other banks. A lead bank might retain only 5% to 20% of the loan after selling the remainder to other investors.¹⁶⁹

Many healthy, established companies can borrow on an unsecured basis. They have a low risk of default, and do not want to incur the cost of

¹⁶⁴ Proposed Amendments to the 2014 ISDA Credit Derivatives Definitions Relating to Narrowly Tailored Credit Events (March 6, 2019).

¹⁶⁵ Gary B. Gorton & George G. Pennacchi, *Banks and loan sales: Marketing nonmarketable assets*, 35 J. MONETARY ECON. 389, 395 (1995).

¹⁶⁶ See, e.g., Board of Governors of the Federal Reserve System, *Single-Counterparty Credit Limits for Bank Holding Companies and Foreign Banking Organizations*, 83 Fed. Reg. 38460 (2018); 12 C.F.R. § 252.

¹⁶⁷ Gorton, *supra* note 165, at 393.

¹⁶⁸ While the interest rate is set when the credit agreement is drafted, most agreements today provide for “flex.” This provision allows the lead bank to raise the interest rate if it determines that such an increase is necessary in order to induce other participants to purchase the loan.

¹⁶⁹ Gorton, *supra* note 165, at 403.

making the loan secured.¹⁷⁰ It can be challenging and expensive to lock down all of the assets of an enterprise because commercial law requires different procedures depending on the type of collateral and its location or the location of the entity that owns the collateral.¹⁷¹

Newer companies and companies with less certain prospects, however, tend to borrow on a secured basis. Lenders worry about repayment, and will offer substantially larger loans at substantially lower interest rates if the borrower gives them a priority claim on the venture's assets. Secured lenders typically have much higher recovery rates than unsecured creditors of the same firm.¹⁷²

Two features of the corporate landscape create challenges in structuring the loan. The first is that there is not a single legal entity that contains all of the assets of the business. Virtually all large companies today structure themselves as a family of related companies.¹⁷³ At the top of the family is usually a Parent corporation. The Parent's stock is issued to the public (if the company is publicly traded) or to private stockholders. The Parent contains no operating assets. Rather, it holds the stock of subsidiary companies. These subsidiaries own the operating assets. Sometimes, these partitions between members of the same corporate family are created for strategic reasons. Risk mitigation may lead firms to limit the assets held by entities engaged in potentially risky operations.¹⁷⁴ Tax planning may lead a firm to place its intellectual property in a favorable jurisdiction.¹⁷⁵ Other times, the corporate structure may be the result of a series of acquisitions that the company has made.¹⁷⁶ In many cases, the structure is part strategic and part an artifact of the company's history. Regardless of the reason, however, inevitably different entities in the corporate group will own different segments of the business's assets.

The second complication arises from the way in which a lender can acquire a valid priority in all of the assets of the business. Lenders frequently make an "enterprise" loan. By this, they mean that they are lending to the business as a whole, and they base the interest they charge on their assess-

¹⁷⁰ Ronald J. Mann, *Explaining the Pattern of Secured Credit*, 110 HARV. L. REV. 625 (1997).

¹⁷¹ See generally U.C.C. Article 9 – Secured Transactions, §§ 9-102–9-110, 9-301–9-342.

¹⁷² Mark J. Roe & Frederick Tung, *Breaking Bankruptcy Priority: How Rent-Seeking Upends the Creditors' Bargain*, 99 VA. L. REV. 1235 (2013).

¹⁷³ Phillip I. Blumberg, *Limited Liability and Corporate Groups*, 11 J. CORP. L. 573 (1986).

¹⁷⁴ See Michael Simkovic, *Limited Liability and the Known Unknown*, 68 DUKE L.J. 275 (2018); see also Lynn M. LoPucki, *The Essential Structure of Judgment Proofing*, 51 STAN. L. REV. 147 (1998); Lynn M. LoPucki, *The Death of Liability*, 106 YALE L.J. 1 (1996).

¹⁷⁵ See Edward D. Kleinbard, *Throw Territorial Taxation From the Train*, 114 TAX NOTES 547, 553 (2007); see also Andrew Blair-Stanek, *Intellectual Property Law Solutions to Tax Avoidance*, 62 UCLA L. REV. 2 (2015).

¹⁷⁶ Mark J. Roe, *Some Differences in Corporate Structure in Germany, Japan, and the United States*, 102 YALE L.J. 1927, 1932 (1993); see generally Jacopo Carmassi & Richard Herring, *The Corporate Complexity of Global Systemically Important Banks*, 49 J. FIN. SERV. RES. 175 (2016).

ment of the entire operations. If things go poorly, however, they want to have a priority claim on all of the business's assets. American commercial law, however, does not allow for a single, blanket lien covering all of the company's assets.¹⁷⁷ Real estate is governed by local law; much, but by no means all of personal property owned by U.S. entities is covered by Article 9 of the Uniform Commercial Code.¹⁷⁸ For property owned by entities outside the United States, laws governing security interests in many types of personal property vary in different jurisdictions, even within economically integrated regions like the European Union.¹⁷⁹

The upshot is that lenders cannot easily get a single obligation from the enterprise as a whole that is secured by the assets of the enterprise as a whole. Rather, lenders must decide which entities commit to repay the loan and which assets stand behind the loan. Tax concerns may lead some borrowers to push for keeping foreign subsidiaries from promising to guarantee the loan.¹⁸⁰ It may not be worth the time and energy to get all non-material subsidiaries to agree to repay the loan.

Once some parts of the organization are not obligated on the loan, the potential for mischief arises. Generally, corporations can transfer assets among various subsidiaries with a simple bookkeeping entry. Thus, lenders insist on mechanisms that ensure that collateral and unencumbered assets, sufficient to repay the loan, stay with entities that are on the hook for repayment.

But corporate borrowers often require the ability to shift assets within the corporate enterprise for operational reasons. They may also want the flexibility to enter into new lines of business that are financed separately and do not fall under the lending agreement.¹⁸¹ In case financial distress arises, lenders want recourse to as much of the enterprise as possible, whereas borrowers want flexibility in running their operations.

The solution that parties have devised is the creation of various "baskets." A basket allows the borrower flexibility in the use of some of its assets or for additional borrowing, within proscribed limits.¹⁸² For example, a

¹⁷⁷ Melissa B. Jacoby & Edward J. Janger, *Tracing Equity: Realizing and Allocating Value in Chapter 11*, 96 TEX. L. REV. 673, 673-735 (2018).

¹⁷⁸ U.C.C. Article 9 – Secured Transactions, § 9-109.

¹⁷⁹ GERARD McCORMACK, SECURED CREDIT AND THE HARMONISATION OF LAW: THE UN-CENTRAL EXPERIENCE vii–viii, 56–60 (2011).

¹⁸⁰ 26 USC § 956(c)(1)(C);(d); Jiyeon Lee-Lim and Elena Romanova, *Expert Q&A on Tax Reform Updates and the Leveraged Loan Market*, *Practical Law*, July 15, 2019, available at [https://www.westlaw.com/w-020-5977?transitionType=Default&contextData=\(sc.Default\)&VR=3.0&RS=cblt1.0](https://www.westlaw.com/w-020-5977?transitionType=Default&contextData=(sc.Default)&VR=3.0&RS=cblt1.0) ("In the past, foreign subsidiaries were not typically expected to provide credit support to a US lender for a related US entity's borrowings in the form of guaranties, security over their assets, or a pledge of more than 65% of their equity.").

¹⁸¹ See generally Christopher A. Hennessy, *Tobin's Q, Debt Overhang, and Investment*, 59 J. FIN. 1717 (2004); Jose Guedes & Tim Opler, *The Determinants of the Maturity of Corporate Debt Issues*, 51 J. FIN. 1809 (1996).

¹⁸² See Steven L. Schwarcz, *The Easy Case for the Priority of Secured Claims in Bankruptcy*, 47 DUKE L.J. 425, 451 (1997); see William W. Bratton, *Bond and loan covenants, theory and practice*, 11 CAP. MKTS. L. J. 461, 469–72 (2016).

company may want the ability to transfer funds or assets to a subsidiary that has neither guaranteed the obligation nor pledged its assets to back up the obligation. The lender may be willing to tolerate such transfers, up to a limited amount, so long as some conditions are met as to the financial health of the borrowers.

Notwithstanding some degree of flexibility built into credit agreements at drafting, the parties may still decide to amend the agreement later or waive some rights when unforeseen circumstances arise. Indeed, few, if any, credit agreements stay in place unamended for the entire life of the loan. Defaults are at times waived because, even though the borrower tripped a covenant, the lending group determined that they still want to remain with the borrower. This may be for some additional compensation (more collateral, a higher interest rate, additional fees) to protect a business relationship, or to avoid a more costly alternative such as liquidation or bankruptcy. But upon default the lenders have the *option* to accelerate the loan and, if they are not paid, foreclose on their collateral, and thus are typically negotiating from a position of strength.

A. *The J. Crew transaction and the “trap door”*

J. Crew Group, by which we mean all of the members of the J. Crew corporate group, was taken private in a leveraged buyout in 2011. TPG Capital and Leonard Green & Partners paid \$3.1 billion for the company. The purchase from the previous shareholders was financed with around \$1.6 billion in new debt incurred by J. Crew Group, including a \$1.2 billion syndicated term loan maturing in 2018.¹⁸³

In 2013, one of J. Crew Group’s corporate entities—Holdings A—issued \$500 million PIK notes.¹⁸⁴ The proceeds from the issuance were used to fund a dividend to the private equity owners who had engineered the buyout. The notes were due in 2019.¹⁸⁵ At the time that these notes were issued, their maturity date was after that of the term loan. As the name implies, the interest that was accrued under the notes could be paid either in cash or in additional notes, at the option of Holdings. Holdings consistently exercised the option to pay in paper rather than in cash.

In 2014, J. Crew entered into a new, restated credit agreement, and used the proceeds to refinance the term loan and notes entered into at the time of the LBO in 2011. This new facility was for \$1.567 billion. The loans that

¹⁸³ J. Crew Group, Inc, Form 10-K for the fiscal year ended January 29, 2011, 2, F-4 (2011), available at <https://www.sec.gov/Archives/edgar/data/1051251/000119312511072649/d10k.htm>.

¹⁸⁴ J. Crew Group, Inc, Form 10-K for the fiscal year ended February 1, 2014, 2, 16 (2014), available at https://www.sec.gov/Archives/edgar/data/1051251/000156459014000961/jcg-10k_20140201.htm.

¹⁸⁵ *Id.*

were part of this facility had a maturity date of 2021.¹⁸⁶ These loans were secured by liens on substantially all of the assets of J. Crew Group, Holdings B, J. Crew OpCo, J. Crew Inc., J. Crew International, Grace Holmes, Inc., H.F.D. No. 55, Inc., Madewell, Inc., and J. Crew Virginia, Inc. Even though these new notes were backed by substantially all of the assets of the J. Crew enterprise, they only became due after the PIK notes.

J. Crew struggled to meet its debt obligations. It did not have to pay any cash to the PIK noteholders prior to their maturity—it instead paid the interest in kind with more notes, effectively deferring cash payment. When the PIK notes matured, however, J. Crew would be faced with the obligation to pay the principal and all accrued interest, which totaled close to \$600 million.

To forestall a default on the PIK notes, J. Crew sought to free up collateral that it could use as a bargaining chip to refinance or extend the maturity of the PIK notes.¹⁸⁷ J. Crew engaged in the following transaction.

First, J. Crew created new “unrestricted” subsidiaries. “Loan parties” and “restricted subsidiaries” are bound by the restrictions of the credit agreement. “Unrestricted subsidiaries” are not. J. Crew created eight new unrestricted subsidiaries. It also sought to designate two restricted subsidiaries already in existence as unrestricted ones.

However, the credit agreement limited J. Crew’s discretion to create unrestricted subsidiaries. J. Crew could only create such subsidiaries if the company’s leverage fell below a specified level. As is customary, the credit agreement specified how the leverage ratio was to be calculated. J. Crew filed documentation with the syndicate agent purporting to demonstrate that it satisfied this requirement. J. Crew was able to satisfy this condition by making what it believes were allowable adjustments to its EBITDA.

In addition to stating the conditions under which J. Crew could create unrestricted subsidiaries, the credit agreement also limited the amount that could be transferred from a restricted subsidiary to an unrestricted one. The reason for this restriction is straight-forward: assets transferred from a restricted subsidiary to an unrestricted subsidiary are no longer automatically part of the collateral package. The credit agreement basket authorizing the transfer of assets from restricted subsidiaries to unrestricted subsidiaries was capped at assets totaling \$277 million in value.

J. Crew wished to transfer its intellectual property rights to the newly created unrestricted subsidiaries. J. Crew formed a special committee of the Board to value its intellectual property assets that were held by one of its restricted subsidiaries—J. Crew International. The special committee hired

¹⁸⁶ *Id.* at F-27.

¹⁸⁷ Amended Complaint, *Eaton Vance Mgmt. v. Wilmington Sav. Fund Soc’y*, 2017 WL 11025298, at *13–14 (N.Y. Sup. Sept. 7, 2017); J. Crew’s Memorandum of Law in Opposition to Plaintiffs’ Motion to Compel the Production of Documents, for in Camera Review, and for Costs, *Eaton Vance Mgmt. v. Wilmington Sav. Fund Soc’y*, 2018 WL 6557593, at *3–4 (N.Y. Sup. Oct. 1, 2018).

an advisor that pegged the assets at \$347 million. J. Crew took advantage of the credit agreement basket by transferring a 72.04% “undivided interest” in its intellectual property assets to the unrestricted subsidiaries.¹⁸⁸

After this transaction, the new holder of the 72.04% undivided interest, Domestic Brand, entered into a licensing agreement with the original holder of the intellectual property rights. This agreement provided that for a fixed fee, which was to be determined in the future, Domestic Brand would allow J. Crew International (the original holder) to use the intellectual property.

Simply moving the intellectual property assets to an unrestricted subsidiary in and of itself would not be sufficient to destroy the lenders’ security interest in those assets.¹⁸⁹ To remove the security interest, J. Crew Group needed a release of the collateral from the administrative agent, Bank of America.¹⁹⁰ Relying on representations by J. Crew Group that the release was authorized under the credit agreement because of the basket, Bank of America released the transferred interest in the intellectual property from the lenders’ liens.¹⁹¹ J. Crew’s crown jewels—its intellectual property—thus fell through a “trap door” and out of the collateral package.

After this transaction, the lending group effectively no longer had a lien on the intellectual property. This is because the lenders could no longer prevent the use of the IP if holders of the majority undivided interest wished to license it. Moreover, one of the parties to the loan had promised to make future payments to an entity that was not obligated to pay back the loan, thus paving the way for more assets to be transferred out of the lenders’ reach.

J. Crew next needed to arrange an extension of the due date for the outstanding PIK notes that were to come due in 2019. To solve this problem, six months after the first set of transactions, in June 2017, J. Crew Group announced a private exchange offer for the outstanding PIK notes. In ex-

¹⁸⁸ The intellectual property rights at issue were originally owned in full by J. Crew International. J. Crew International was both a loan party and a restricted subsidiary under the loan agreement. It transferred the 72.04% interest to J. Crew International Cayman, which was not a loan party but was a restricted subsidiary. J. Crew claimed that this transfer under the provisions of the credit agreement which allowed for transfers to a restricted subsidiary. J. Crew International Cayman then transferred the interest to Brand Holdings, which was one of the new unrestricted subsidiaries. J. Crew claims that J. Crew International was allowed to make this transfer by a provision in the credit agreement that allowed for transfers by restricted subsidiaries that are not themselves loan parties. Brand Holdings then transferred the interest to another one of the new unrestricted subsidiaries, Brand Intermediate. Brand Intermediate then transferred the interest to yet another new unrestricted subsidiary, Brand. Finally, Brand transferred the interest to a fourth new, unrestricted subsidiary, Domestic Brand. J. Crew International retained a 27.96% undivided interest in the intellectual property assets. *See* Amended Complaint, *supra* note 187, at 22, ¶ 76.

¹⁸⁹ U.C.C. Article 9 – Secured Transactions, §§ 9-315(a)(1); 9-203, 9-205, 9-325(a).

¹⁹⁰ Bank of America was subsequently replaced as administrative agent by Wilmington Savings Fund Society, FSB, which also ratified the release of collateral. *See* Amended Complaint, *supra* note 187, *at 4–5, ¶6. This led lenders objecting to the restructuring to sue WSFS, but without much success. *Eaton Vance Mgmt. v. Wilmington Sav. Fund Soc’y*, No. 654397/2017, 2018 BL 152173 (N.Y. Sup. Ct. Apr. 25, 2018).

¹⁹¹ *See* Amended Complaint, *supra* note 187, *at 4–5, ¶6.

change for the old PIK notes, creditors would receive \$250 million of 13% senior secured notes, \$190 million of 7% preferred stock in Holdings and 15% of the equity of Holdings. The new notes were to be secured by the following: a first lien on the 72.04% interest held by Domestic Brand, a first lien on Domestic Brand's rights under the licensing agreement, a first priority lien on all the other assets of four of the new, unrestricted subsidiaries, and a pledge of 100% of the stock of four of the new unrestricted subsidiaries. The effect of this exchange, in essence, was to use the assets transferred out of the term lenders' collateral package to offer new collateral to the PIK note holders in exchange for an extension of the maturity date on the notes.

On the same day, J. Crew Group announced a consent solicitation made to the holders of the term loan. This offer to the term lenders was analogous to an "exist consent" commonly used in bond restructurings.¹⁹² The consent solicitation provided that \$150 million of the outstanding term loan (roughly 10% of the outstanding balance) would be purchased at par. Redeeming at least part of the loan at par would be very attractive, given that the term loan was then trading at about 70% of par. The catch was that only those holders of the loan who consented to the solicitation would be eligible to participate in the repurchase. The consent sought had two main features. The first was to release the lenders' lien on the remaining intellectual property interests in J. Crew International and have that interest transferred to Domestic Brand. The second feature of the consent was to ratify all of the prior actions taken to date.¹⁹³

After the intellectual property had been transferred to Domestic Brand, the market price of the term loan declined. Holders of the PIK notes had bought some of the term after this decline. These holders had an incentive to vote for the consent solicitation, given that it would ensure that they were able to exchange their PIK notes for the new obligations offered by J. Crew Group. As is common in such solicitations, holders of smaller amounts of the term loan also had an incentive to vote in favor. Had they objected, and sufficient other holders voted in favor, they would not be entitled to participate in the \$150 million purchase of the term loan at par. In the end, a majority of the term holders voted in favor of the consent solicitation.

The effect of these transactions was to first transfer value outside of the loans' collateral package, offer this value to the PIK lenders, and then use the consent solicitation to retroactively bless the deal. Not surprisingly, holders of the term loan have sued. Their basic argument was that the credit agreement did not authorize these transactions because, *inter alia*, the value of J. Crew's intellectual property was so great (relative to its other assets) as to

¹⁹² Lee C. Buchheit & G. Mitu Gulati, *Exit Consents in Sovereign Bond Exchanges*, 48 UCLA L. REV. 59–84 (2000); Keegan S. Drake, *The Fall and Rise of the Exit Consent Note*, 63 DUKE L.J. 1589–1626 (2013); Kenneth Daniels & Gabriel G. Ramirez, *Debt Restructurings, Holdouts, and Exit Consents*, 3 J. FIN. STABILITY 1–17 (2007).

¹⁹³ The funds to pay for the purchase of \$150 million of the term loan were to come largely from a new issue of debt totaling \$127 million.

constitute “substantially all” of J. Crew’s assets. The transfer of substantially all assets would require unanimous consent of all participants in the term loan, and not a mere majority.

While valuation is a contestable issue—and the credit agreement did not specify a method of valuation for intellectual property—it is clear that the parties to the credit agreement never anticipated these transactions. Lenders realized they were making some concessions to borrowers by providing baskets. But no one contends that the original lenders on the term loan would have extended credit on the same terms if the intellectual property had been left outside of the collateral package. Moreover, secured lenders are generally assumed to be entitled to recover before structurally subordinated, unsecured creditors (the original position of the PIK noteholders).¹⁹⁴ But in this situation, the PIK noteholders managed to dramatically and unexpectedly improve their initial position through an out-of-court (non-bankruptcy) restructuring process.

Both cases involve situations where there is little doubt about the expectations of the parties at the time of the transaction. In *Hovnanian*, the protection seller believed that it would only have to pay out if the company encountered financial distress and could not make payments on its obligations. In *J. Crew*, the lenders believed that they had a security interest in the company’s intellectual property. Clever folks found ways to upend these expectations.

III. BOUNTIES FOR ERRORS TO MITIGATE DAMAGE

In both *Hovnanian* and *J. Crew*, financial instruments built on rules-based systems failed to perform as expected. With the benefit of hindsight, some of the contractual gaps in these instruments may appear obvious. In the case of single name CDS, the value of bonds that determine payouts in the event of default and the timing of events of default are prone to manipulation.¹⁹⁵ In the case of credit agreements, under-specified rules for valuation

¹⁹⁴ Douglas G. Baird & Bob Rasmussen, *The End of Bankruptcy*, 55 *STAN. L. REV.* 751 (2002). Ellias and Stark document a number of situations in which aggressive debtors were able to place *unsecured* creditors in a weakened position. JARED A. ELLIAS & ROBERT STARK, *BANKRUPTCY HARDBALL* (2019), <https://papers.ssrn.com/abstract=3286081> (last visited Aug 4, 2019). However, prior to *J. Crew*, secured creditors were generally believed to be relatively insulated from such maneuvering.

¹⁹⁵ CDS suffer from biased sampling of the creditworthiness of a reference entity because the bond auction process used to value CDS after default often uses only a narrow slice of the reference entity’s capital structure to price CDS contracts. This problem could be mitigated by instead using a broader weighted average of debt instruments that would be more representative of the financial condition of the reference entity and would be more difficult for debtors, creditors, or CDS market participants to manipulate.

CDS markets also rely on a short-cut, using the difference between the face value of debt and its market value at a post-default auction as a proxy for losses to creditors. But some instruments are worth much more or less than their face value at the time of issue. CDS might more accurately reflect losses from deterioration in the financial condition of a debtor if CDS instead

of assets can lead to valuable collateral being transferred away from lenders through baskets meant to provide limited flexibility.

At the time when the contracts governing the operation of these instruments were drafted, the techniques that were subsequently used to exploit gaps in the contracts were difficult to anticipate. Commercial contracts have grown incredibly long and complex. Law firms drafting them face cost pressures and time constraints from clients. Given the many potential vulnerabilities, it is difficult to anticipate and guard against every problem that might arise. Whereas those drafting contracts are often operating under time pressure, those seeking to exploit flaws can analyze contracts at their leisure, searching for the weakest link to exploit.

In addition, in the context of syndicated leveraged loans, agency costs and collective action problems may at times prevent lenders' attorneys from being as thorough as they ideally would be in negotiating terms to protect lenders.¹⁹⁶ Unlike members of the syndicate who profit only based on the performance of the loan, the lead arranger profits based on fees for structuring and distributing loans.¹⁹⁷ Because arranger banks are mindful of opportunities to serve as a lead arranger on future deals and have an interest in pleasing large repeat borrowers in the leveraged loan market (for example private equity firms), arrangers may not push back as hard against such borrowers as members of the syndicate would ideally prefer.¹⁹⁸ And while members of the syndicate who do not serve as arrangers could have their own lawyers inspect and review the loan documents in deciding whether or not to participate, each member of the syndicate decides whether to hold a relatively small portion of the loan, and therefore is unlikely to pay as much attention to the loan documents as the borrower.¹⁹⁹

used the difference between the market value of debt at post-default auction and the market value of the same debt instruments at issuance.

¹⁹⁶ Analogous problems may preclude an underwriter of high yield bonds from being too aggressive in insisting on contractual protections for borrowers.

¹⁹⁷ Arrangers are typically required by borrowers to hold a portion of the loan on their balance sheet to reassure other members of the syndicate that the borrower is creditworthy and the loan is high quality. However, an arranger can quietly offload risks related to loan performance through the use of LCDs or CDS. Arrangers who hedge their exposures in this way may have little if any net exposure to the performance of the underlying loan. This hedging widens differences in incentives between arrangers and participants who buy and hold. For a discussion of related governance problems in the context of bankruptcy, see Edward Janger & Adam Levitin, *One Dollar, One Vote: Mark-to-Market Governance in Bankruptcy*, 104 IOWA L. REV. 1857 (2019).

¹⁹⁸ Victoria Ivashina & Anna Kovner, *The Private Equity Advantage: Leveraged Buyout Firms and Relationship Banking*, 24 REV. FIN. STUD. 2462–98 (2011) (“[B]ank relationships formed through repeated interactions . . . allow leveraged buyouts sponsored by private equity firms to occur on favorable loan terms. . . . Bank relationship strength is associated with [a] decrease in the spread and . . . increase in the maximum debt to EBITDA covenant. We also find evidence that banks price loans to cross-sell other fee business.”)

¹⁹⁹ Rongbing Huang, Donghang Zhang & Yijia Zhao, *Relationship Banking and Loan Syndicate Structure: The Role of Private Equity Sponsors*, 53 FIN. REV. 461–98 (2018) (“[A] stronger relationship between the lead bank and the borrower’s PE firm enables the lead bank to retain a smaller share of the loan and form a larger and less concentrated syndicate.”).

This raises the following questions: what can be done to increase the likelihood that these systems will perform as expected going forward? What can be done to minimize the costs of errors and problems that will inevitably materialize? Rules-based systems have advantages in terms of efficiency and scalability, but require frequent revision and updating as problems are discovered.

Traditionally, errors are discovered years after a contract has been drafted, when a shrewd and aggressive investor spots an opportunity for advantage and acts on it. Once the error is exposed and publicized, market participants can then adjust contract terms going forward. However, the party that found the creative reading can potentially capture a great deal of value. Moreover, to the extent that the contractual provisions at issue have been used across the industry in other outstanding financial contracts which cannot be freely changed after the fact, others can engage in the same aggressive tactics without providing to the market the public service of identifying contractual errors. This may encourage over-investment in costly copycat litigation and under-investment in basic research to discover errors.

We propose an approach that would discover holes sooner (often before they are finalized), allocate more value to the act of error-spotting which provides dynamic benefits to financial markets, and allocate less value to copycat litigation that largely serves to add friction and costs to financial market contracts. Under our reform, an industry trade association, regulator, or other party with a stake in maintaining markets for certain kinds of financial products would offer a prize to market participants who detect and publicize flaws in rules so that more problems can be quickly corrected.²⁰⁰

The economies of scale that can be achieved by having organizations that specialize in checking for errors and holes in contracts—and not merely in drafting those contracts—have spawned several successful businesses. There are covenant review services such as Covenant Review and Debtwire. However, these services typically provide analyses to buy-side investors after covenants have been finalized—i.e., they often advise those who hope to either exploit or avoid problems rather than correct them. Covenant Review advertises that it provides: “analysis of indentures and credit agreements by the same lawyers who used to create and exploit loopholes for underwriters and financial sponsors” and can thereby assist with “Alpha generation from new investment ideas, often at odds with ‘conventional wisdom’ about the meaning of the documents.”²⁰¹

What we propose is the commercial law equivalent of paying cybersecurity firms to attempt to hack one’s own network or find bugs in one’s own software—without causing any real damage—so that the problems can

²⁰⁰ For example, this service could be coordinated in the derivatives market through ISDA, in the syndicated loan market through the Loan Syndications and Trading Association (LSTA), and in the bond market by the Securities Industry and Financial Markets Association (SIFMA).

²⁰¹ COVENANT REVIEW, <https://covenantreview.com/> (last visited Oct 18, 2019).

be corrected before they are exploited by more dangerous hackers.²⁰² This would supplement rather than replace existing networks of lawyers. If bounties are open-ended, error hunters might have a freer hand than lawyers working for arranger banks. There is evidence from the software market that bounty programs can supplement internal error checking by salaried employees and often spot problems at lower cost to the companies than using internal employees alone.²⁰³ Perhaps there is value to having many different eyes consider the same problem.

Complete prevention is probably not possible. But even marginally shrinking the lead time between discovery of contractual errors and the time when they are corrected—or cease to be copied into new contracts—will reduce the opportunity to profit from discovering contractual errors and could reduce investment in such efforts.²⁰⁴

There are several complications with our proposal, each of which we address in turn. These include privacy concerns regarding financing and hedging arrangements, confidentiality concerns when holes in contracts are identified, appropriate compensation levels and proper incentives for those finding the problems, and turnaround time and information costs.

A. *Privacy concerns regarding financing and hedging arrangements*

Providing bounties for errors requires that those hunting for errors have access to information about firms' financial arrangements, such as the detailed language of loan agreements, bond indentures, or derivatives agreements.

When such information is already publicly available, privacy considerations are limited. For example, loan agreements or bond indentures will be disclosed shortly after they are executed if the debtor is a publicly traded firm and the contracts are large enough to be "material agreements" under the securities laws.²⁰⁵ In such cases, firms would sacrifice little in the way of privacy by making late-stage drafts available to pre-approved, qualified bug hunters who pledge to protect confidentiality through non-disclosure agreements. In such circumstances, in addition to contractual safeguards, bug hunters would be obligated by insider trading laws to refrain from trading in

²⁰² Derek E. Bambauer, *Ghost in the Network*, 162 U. PA. L. REV. 1011–92, 1019–21 (2013) (complexity [and] the limited testing cycle . . . mean vulnerabilities are inevitable. Exposure . . . means that attackers will locate and exploit those flaws [T]he right approach to such inevitable failure is to limit the damage caused.“).

²⁰³ Matthew Finifter, Devdatta Akhawe & David Wagner, *An Empirical Study of Vulnerability Rewards Programs*, 273–88 (2013), <https://www.usenix.org/conference/usenix-security13/technical-sessions/presentation/finifter> (last visited Aug. 18, 2019).

²⁰⁴ Nathan Alexander Sales, *Privatizing Cybersecurity*, 65 UCLA L. REV. 620–689, 629 (2018).

²⁰⁵ *Fast Answers, Form 8-K*, U.S. SECURITIES & EXCHANGE COMMISSION, <https://www.sec.gov/fast-answers/answersform8khtml.html> (last visited Oct. 15, 2019)

the firm's securities during the brief period when the bug hunters have access to non-public information.

However, for privately held firms with only loans (and no publicly traded bonds), privacy concerns could be greater. Securities laws would not obligate such firms to disclose material agreements to the general public, and such firms might prefer to keep the precise nature of their capital structure confidential. Even in such instances, however, the process of loan syndication and raising capital from institutional investors will require exposure of details of the firm's financial condition and capital structure to a relatively wide range of investors. Offering expert bug hunters approved by the firm's existing lenders access to such information (subject to NDAs) might not represent a much larger sacrifice of privacy than offering such information to actual or prospective lenders' external legal and financial advisors.

In situations where privacy is truly paramount, or where parties to contracts wish to "crowdsource" bug-hunting to a broader group than the investment community that would typically have access to credit agreements, it should be possible to modify contracts prior to releasing them to disguise the identity of the parties to the contract while still providing sufficient information to hunt for many kinds of errors.²⁰⁶ A trusted intermediary (like a trade association or law firm or regulator) could aggregate and anonymize contracts from many different companies before making them available to bug hunters. Since the intermediary would still know the identity of the parties to the contract, the intermediary could then convey any errors that were discovered to the interested parties.

Parties to derivatives may be particularly likely to wish to keep their identities private.²⁰⁷ However, in such cases, the identifying information that is likely to be most relevant to error-hunters is the identity of the reference entity, not the identity of the parties to the derivatives contract.²⁰⁸ There is also likely to be relatively little variation in derivatives contracts—compared to loan or bond contracts—because of the widespread use of standardized master agreements and definitions provided by ISDA.

B. Appropriate compensation levels and incentives

Compensating error hunters appropriately would be one of the greatest challenges to making the system work.²⁰⁹

²⁰⁶ Some errors might be hard to detect without knowledge of the characteristics of many entities of a debtor firm, which could complicate anonymization without loss of relevant information.

²⁰⁷ Michael Simkovic, *Secret Liens and the Financial Crisis of 2008*, 83 AM. BANKR. L.J. 253 (2009).

²⁰⁸ Aggregated information about trading volumes for derivatives referencing particular entities is already disclosed by clearinghouses like the Depository Trust and Cleary Corporation.

²⁰⁹ See, e.g., Sales, *supra* note 204.

Compensation should ideally be neither too high nor too low. In theory, those who can detect errors in contracts could sell their knowledge of errors to firms that would exploit those errors rather than to firms trying to correct the errors. Offering compensation that is too low would discourage the most talented error hunters from participating in bounty programs.²¹⁰ These concerns about competitive pricing are greater in the commercial law context than in the realm of software vulnerabilities, because selling vulnerabilities in software to malicious actors could carry criminal penalties,²¹¹ whereas selling knowledge of errors in commercial contracts to hedge funds, private equity funds, or corporate debtors is legal. On the other hand, offering compensation that is too high might defeat the purpose of reducing the costs of detecting and correcting errors.

However, even compensation that is lower than what a “black hat” hedge fund would pay for errors would still likely provide substantial benefits to market participants in detecting errors earlier, relative to the status quo. If there are enough error hunters looking at the same document, it would become more challenging for “black hat” hedge funds to buy the silence of everyone who discovers its problems. It only takes one error checker to sell the information to lenders. Even if hedge funds pay the most and get the information fastest, they may have a limited willingness to pay multiple error checkers for the same idea. Even if hedge funds attempt to monopolize access to information, it would be difficult for hedge funds to ensure that one error checker won’t sell information to the lender later to enable the lender to seek to amend the documents. A bounty system increases the chances that lenders will get the information sooner than they otherwise would, even if the hedge funds still get information faster than the lenders.

All else being equal, error hunters should presumably be paid more for detecting errors with the greatest potential cost if left undetected and uncorrected. The quantitative aspect of this is relatively straightforward, while qualitative considerations present more challenges. On the quantitative side, an intermediary could provide an important source of information to error hunters and contracting parties by tracking the dollar value of outstanding contracts sharing similar language. Because of the language’s widespread adoption, this could enable error hunters to focus their efforts on potentially problematic language with the largest potential negative impact on the market. Focusing on the most widespread problems would help leverage economies of scale in error-hunting. However, even problems that are not that widespread, but are large enough to be worthwhile for investors to exploit, should still be financially worthwhile for error hunters to detect and report,

²¹⁰ See COVENANT REVIEW, *supra* note 201; see also Sales, *supra* note 204, at 624–25.

²¹¹ Sales, *supra* note 204, at 644, 648.

as long as the cost of correcting the problem is less than the cost of the problem.²¹²

Whether or not a gap or potential gap in a contract exists ultimately depends on whether an investor could exploit a certain strategy and whether a court is likely to find a particular approach to contractual interpretation plausible. Hedge funds or debtors that successfully exploit a gap or error in complex contracts demonstrate that a potential problem really is a problem. A bounty-based system that attempted to prevent such costly demonstrations would require some kind of judgment by a decision-maker in charge of payment of bounties that the problem was plausible enough and serious enough to merit payment. One way to prevent underpayment by an overly skeptical decision maker would be to let bounty hunters who are initially denied claim payment if the problem they log subsequently materializes.

How should error hunters be compensated when multiple error hunters report the same problems? All else being equal, error hunters who detect errors faster, or who are more detailed and helpful in their explanation of the problem and how to fix it, should be compensated more than those who are slower or more cursory. Paying more to those who disclose the flaw first—or only paying for the first disclosure—could encourage prompt disclosure of any flaws that are discovered.

Studies do find that in practice, the total cost of compensation for crowdsourced bug checking tends to be lower than the cost of hiring full time security researchers to perform similar work.²¹³

Error checkers would also need to be assured that they would be compensated for the errors they disclose. Once they disclose the errors, they would have little leverage to secure payment.²¹⁴ On the other hand, end users seeking to correct errors may not wish to pay for reported errors without verifying the quality of the report.²¹⁵ Problems like these could potentially be solved through error-hunting firm reputation and a subscription model, or through verification of the quality and importance of bugs by third party intermediaries.²¹⁶

²¹² In the loan context, there will presumably be much greater focus on the leveraged loan market where it is known that the chances of future distress are non-negligible. However, even for loans that do not end up in distress, there is still some collective cost to lenders to gaps in documentation because such gaps could serve as precedents that will be copied into other deals.

²¹³ Matthew Finifter, Devdatta Akhawe & David Wagner, *An Empirical Study of Vulnerability Rewards Programs*, 273–288 (2013), <https://www.usenix.org/conference/usenix-security13/technical-sessions/presentation/finifter> (last visited Aug 18, 2019).

²¹⁴ Kenneth J. Arrow, Economic Welfare and the Allocation of Resources for Invention, in *THE RATE AND DIRECTION OF INVENTIVE ACTIVITY: ECONOMIC AND SOCIAL FACTORS* 609, 616 (1962); CHARLIE MILLER, INDEP. SEC. EVALUATORS, *THE LEGITIMATE VULNERABILITY MARKET: INSIDE THE SECRETIVE WORLD OF 0-DAY EXPLOIT SALES* 1 (2007).

²¹⁵ George A. Akerlof, *The Market for “Lemons”: Quality Uncertainty and the Market Mechanism*, 84 Q. J. ECON. 488–500 (1970).

²¹⁶ Sales, *supra* note 204 at 625, 634–36.

Finally, there is a question about who should pay. Trade associations could potentially fund bounties for errors through increased fees on their members, but members might benefit from these programs unequally, not only because of differences in market share, but also because of differences in the perceived quality of their lawyers' work. A mutually agreeable approach to collective funding by the industry may be needed to fund appropriate bounty levels. In the absence of a collective approach to funding, some groups of lenders could selectively opt-in to receive error reports in exchange for a subscription fee, but if other lenders copy changes appearing in subscribing lenders' contracts, this could lead to underinvestment and free-riding.

C. Confidentiality concerns when holes are identified

Once error hunters discover a contractual flaw, questions remain about how much information about the contractual flaw should be disclosed, and to whom. Ideally, sufficient information about the flaw would be disclosed to those who are in the best position to fix it, and minimal information should be disclosed to those likely to exploit the flaw before it can be fixed.²¹⁷ This may be relatively easy to accomplish in the derivatives market, where information could be shared with ISDA, which is generally neutral as between the parties to derivatives contracts, and could modify its standard form contracts and definitions.

But in the syndicated loan market, it could be far more challenging to distinguish "white hats" who fix problems from "black hats" who exploit them. Thus, information about flaws in contracts would likely be disclosed to both secured lenders, unsecured creditors, and large sophisticated corporate debtors. At times, these groups may have interests that are in conflict with one another. Nevertheless, to the extent that flaws in contracts and unpredictable priority drive up ex ante costs for all concerned, lenders and debtors may be able to reach common ground on changes to contractual language, possibly with some form of compensation paid to permit sensible amendments to flawed agreements.

To prevent unnecessary duplication of effort, it would be helpful to disclose previously reported vulnerabilities. Disclosing these only after they have since been reported and corrected in most contracts would minimize the potential harm from disclosure.²¹⁸ But waiting too long to disclose because some contracts have not yet been updated could lead to wasteful duplication of effort that could drive up costs or reduce incentives for reward-driven error hunters to participate.

²¹⁷ *Id.* at 669–71.

²¹⁸ Aron Laszka, Mingyi Zhao, Akash Malbari & Jens Grossklags, *The Rules of Engagement for Bug Bounty Programs*, 22ND INTERNATIONAL CONFERENCE ON FINANCIAL CRYPTOGRAPHY AND DATA SECURITY, 3 (2018), <http://aronlaszka.com/papers/laszka2018rules.pdf>.

D. Information costs and speed

Processing comments from multiple sources who report errors would require investment of time and energy to determine which comments are valid and helpful. Costs would be particularly high, at least initially, if contract checking was crowdsourced and a large number of unknown error checkers responded. Over time, however, costs would likely decline as firms or individuals who engaged in error checking developed reputations for quality. Those with the strongest reputations would see their feedback prioritized, reducing information costs.

In some situations, for example funding to finance an acquisition, it may be necessary to draft credit agreements and other documentation on tight deadlines. This may permit limited time for error checking and review of such error checking. However, many agreements, such as routine refinancing at the maturity of existing credit facilities, can be anticipated in advance, allowing more time for drafting and error checking. Even in situations where turnaround is tight and errors cannot be caught and corrected before closing, detecting errors shortly thereafter would still be helpful. Post-closing detection would prevent such errors from being copied into the next deal or becoming part of a standard form agreement.

CONCLUSION

Rules-based systems have advantages in terms of efficiency and scalability but require frequent revision and updating as problems are discovered. This article contributes to the literature on rules versus standards by developing a theory of iterative rules revision. This theory helps explain the respective contributions and incentives of those who seek to exploit gaps in rules, those who are harmed by these strategies and challenge them, and those who maintain rules-based systems and revise rules. Together, these parties help develop rules-based systems that become more robust and harder to exploit over time.

We propose to minimize the harm from inevitable errors or gaps in commercial contracts and speed up error correction through a system that facilitates payments of bounties for errors. This could help detect errors at an earlier stage. We anticipate that this approach could reduce the number and prevalence of errors, reduce the gains to be won from exploiting errors, and reduce the costs to market participants dealing with disruption resulting from such exploitation. We canvas issues that need to be resolved in implementing such a proposal, including confidentiality concerns, compensation levels and incentives, and collective action problems.