THE MYTH OF OPTIMAL EXPECTATION DAMAGES

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A much-debated question in contract law scholarship is what the optimal measure of damages for breach should be. The casebook answer—drawing from the theory of efficient breach—is expectation damages. This standard answer, which was a major contribution of the law and economics field, has come under attack by theoreticians within that field itself. To shed an empirical perspective on the question, we look at data on the types of damages provisions parties contract for themselves in international debt contracts. Specifically, we examine issuer call provisions, which are economically equivalent to damages for prepayment, yet not viewed as legally problematic in the manner an actual liquidated provision might be. We find little evidence of a preference for the expectations damages measure.

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I. INTRODUCTION

One of the most debated questions in contract law is what the optimal measure of damages for a breach is. One might think that this question would largely be left to the parties themselves, since the possibility of breach is something that all parties to a contract should contemplate. However, for a variety of reasons, ranging from reluctance by contract parties to broach the uncomfortable subject of relationship failure to the fact that courts tend to second-guess the damages provisions that parties do contract for, parties often fail to explicitly provide their preferred remedies for breach of the contract. As a result, courts frequently have to determine the appropriate amount of damages for a contractual breach. And that makes the question about the optimal default rule for damages important.

The textbook answer has long been that courts should set damages at the amount that puts the jilted party in as good of a position as she would have been in had the contract been performed—expectation damages. For example, if Karishma, a whiskey distributor, promised to deliver twelve cases of Japanese


4. Id.

5. U.C.C. § 1-106 (specifying that remedies for breach of contract are to be “liberally administered to the end that the aggrieved party may be put in as good a position as if the other party had fully performed . . . .”). See also, RESTATEMENT (SECOND) OF CONTRACTS §§ 344, 347(a) (AM. L. INST. 1981) (“The initial assumption is that the injured party is entitled to full compensation for his actual loss”); RESTATEMENT (FIRST) OF CONTRACTS § 329 cmt. a (AM. L. INST. 1932).
whiskey to Keegan’s restaurant on January 31, 2019, but decides not to do so because she is able to find another buyer willing to pay a higher price, she should have to pay Keegan his cost to purchase an equivalent set of those cases from an alternate supplier, including any transaction costs that might be incurred in identifying and entering an agreement with such alternate supplier. In 1936, Lon Fuller and William Perdue famously asked the question of why the law favored expectation damages over the alternatives, reliance and restitution, setting up a debate over the optimal measure of damages that has continued to this day.6

The clearest and loudest answer to the Fuller-Perdue puzzle came in the 1970s, with the emergence of the field of law and economics. One of the early projects of law and economics scholars was to use economic arguments to explain why certain common law doctrines were efficient. Given the question posed by Fuller and Perdue, the law’s preference for expectation damages was a ripe topic.

Drawing from what is now known as the theory of efficient breach, a series of scholars argued that expectation damages are the measure that parties—assuming full information, equal bargaining power and so on—would rationally agree to.7 That is, expectation damages are the default rule because they are the measure that parties would have agreed to had they explicitly contracted for it ex ante.8 The theoretical argument made in support of this claim is that


8. This is the view that default rules should be set to mimic what the majority of parties would in fact contract for (the “majoritarian default”). See Nathan B. Oman, THE FAILURE OF ECONOMIC
expectation damages are the measure that causes the breaching party to internalize the costs of the breach, thereby setting up the right set of incentives when a party is making a determination of whether to perform under the contract or breach.9 Robert Hillman’s Contract Law casebook explains:

Most writers explain the expectancy goal as the best method for encouraging people to make and rely on their contracts, which benefits them and society. . . . A damages measure any lower than lost expectancy would undermine people’s confidence in their contracts, and a measure larger than expectancy would discourage them from making contracts because they would be wary of the extent of their liability for breach.10

The foregoing economic explanation for why the law favors expectation damages has, over the years, garnered broad support.11 However, the field of law and economics itself has become skeptical of the simple theory of efficient breach.12 In particular, a number of scholars have offered critiques complicating the assumptions of the basic model supporting the optimality of expectation damages.13 For example, under certain circumstances, one party may be incentivized to sub-optimally over invest, without any adjustment for

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9. Similarly, Allan Farnsworth’s contract law treatise justifies the ban on penalty or supra compensatory damages by pointing to the optimality of the expectation damages measure. See E. ALLAN FARNSWORTH, CONTRACTS 763 (4th ed. 2004).


11. See Oman, supra note 8, at 844 (“The economic explanation of the expectation measure is one of the earliest and most enduring insights of the law-and-economics movement: the theory of efficient breach.”).


the risk that the contract may not be performed, because of an expectation that
the other party, if it breaches the contract, will have to pay expectation
damages. Based on these complicating factors, some argue that expectation
damages are under-compensatory and others argue that they are over-
compensatory.

This theoretical debate over whether expectation damages or some other
measure of damages is optimal rests on an assumption that there is one measure
of damages that is optimal, regardless of variations in the types of parties and
their economic relationship. This assumption is remarkable when compared
with how we generally view contract terms. With respect to other contract
terms, there is broad consensus—particularly in contracts among sophisticated
commercial parties—that optimal contract terms are what the parties choose.
After all, parties know what suits them best. Given that the bargain over
contract rights and obligations among parties is inevitably a function of factors
such as price, risk preferences, liquidity tolerance, and so on, it stands to reason
that different sets of parties will contract for a range of different contract terms.
There may be standard terms that develop for subsets of a particular market, but
one would expect variation across different types of transactions. We would
expect this for damages provisions just as we would for other contract terms.

To illustrate why we would expect variation in damages provisions,
image a company in a highly volatile industry, with large fluctuations in
profits and losses, and small capital reserves. Given these characteristics, this
firm’s negotiations with a prospective lender would probably result in a
different pricing scheme than the one that could be negotiated by a highly
capitalized firm in a low volatility industry. And if one were to view damages
provisions as a component of this pricing scheme—which, as an economic
matter, they are—one might expect to see variation in the types of damages
provisions that different types of firms are able to negotiate. Put differently,

14. Baird, supra note 13, at 9. Other factors can complicate the story as well, such as
verifiability, asymmetry of information, incentives to renegotiate, and so on. ERIC POSNER,
CONTRACT LAW AND THEORY 172 (2d ed. 2016); Klass, supra note 12, at 376.

15. E.g., Melvin A. Eisenberg & Brett H. McDonnell, Expectation Damages and the Theory of
Overreliance, 54 HASTINGS L.J. 1335, 1371–74 (2003); Aaron S. Edlin, Cadillac Contracts and Up-
front Payments: Efficient Investment Under Expectation Damages, 12 J. L. ECON. & Org. 98, 99
(1996).


17. See Robert E. Scott & George G. Triantis, Embedded Options and the Case Against
one should see different prices for different types of damage provisions, if one were to hold the lender-borrower duo constant.\textsuperscript{18}

Although we would expect variation in damages provisions, the current system has so internalized compensation as a basis for damages that it goes beyond a mere default rule.\textsuperscript{19} Courts strike down explicitly contracted-for damages terms that they deem to be supra compensatory.\textsuperscript{20} Sophisticated parties in bespoke contracts are told by courts that they must be content with an off-the-rack damages measure (which presumably they would have contracted for themselves, had they been acting rationally).

A few legal scholars have questioned the damages exceptionalism that makes the default rule for damages more difficult to contract out of than other defaults.\textsuperscript{21} Questioning that a single optimal measure of damages exists and that parties typically contract for expectation damages, Robert Scott and George Triantis write:

> Given the great variety of conditions under which parties contract for [the option to pay damages and exit the contract], it should not be surprising that commercial and consumer contracts contain a wide range of option prices. We explain the heterogeneity in [contracted for damages amounts] and argue that they are rarely equivalent to the measure of the seller’s expectation in a completed sale.\textsuperscript{22}

Victor Goldberg echoes Scott and Triantis: “By framing the problem as one of pricing the termination option, it is clear that in a wide variety of contexts the efficient rule (i.e., [the] one that sophisticated parties would voluntarily

\textsuperscript{18} Financial economists have, along these lines, estimated that while fixed price prepayment options cost borrowers as much as sixty basis points, make-whole premiums cost as little as five. See Richard Kish & Miles Livingston, \textit{Estimating the Value of Call Options on Corporate Bonds}, 6 J. APPLIED CORP. FIN. 95, 99 (1993); Eric Powers & Sergey Tsyplakov, \textit{What Is the Cost of Financial Flexibility? Theory and Evidence for Make-Whole Call Provisions}, 87 FIN. MGMT. 485, 485 (2008).

\textsuperscript{19} See Scott & Triantis, supra note 17, at 1435 (making this point).

\textsuperscript{20} See id.


\textsuperscript{22} Scott & Triantis, supra note 17, at 1430. See also id. at 1433 (“In most contract relationships, an expectancy default rule is no more appropriate with respect to damages than with respect to the price of any other good, service, or contract term for which there is no established market price.”).
choose) bears no relation to the ones featured in the lawyer’s rhetoric and the economist’s model.\textsuperscript{23}

And Greg Klass writes:

According to the simple [expectation damages] theory, the legal remedy for breach serves only to create efficient incentives [for breach]. . . . [But] parties enter into contracts for two sorts of reasons: to give one or [the other] a new reason to perform [or] to shift risk among them. In some contracts . . . risk allocation is the more salient function.\textsuperscript{24}

But Scott, Triantis, Goldberg, and Klass are outliers in their view that there is no single optimal damage measure for a contract breach. As noted at the start, both traditional legal doctrine and a significant body of contract law scholarship either view the compensation principle and expectation damages as optimal or argue that some other measure (e.g., reliance) is optimal instead.\textsuperscript{25}

One might expect, given the theoretical literature arguing over the optimal measure of contract damages, that there would be a body of empirical research examining actual contract damage provisions as well—there is not.\textsuperscript{26} Many eminent contract theorists, in their theoretical treatments of the question, anecdotally observe that damages provisions, when explicitly contracted for in the real world, seem to frequently deviate from the expectation measure.\textsuperscript{27} But that is all. In their casebook, \textit{Contract Law and Theory}, Robert Scott and Jody Kraus implore a more concrete inquiry:

Instead of guessing what breach of contract damage[s] remedy parties would adopt, why not conduct empirical investigations? Predicting the cost-minimizing outcome is less costly than conducting empirical investigations in numerous markets. Our judicial system is not organized in such a way as to make it possible for judges to commission such studies. Litigants in [particular cases] are unlikely to commission a thorough study. . . . Suffice it to say that legal academics have little taste for such empirical investigations.\textsuperscript{28}

\begin{flushleft}
\textsuperscript{24} See Klass, supra note 12, at 377.
\textsuperscript{25} See Boyle, supra note 6, at 372.
\textsuperscript{27} See Scott & Triantis, supra note 17, at 1430–32, 1453–54.
\textsuperscript{28} Scott & Kraus, supra note 26, at 107 n.76; see also Klass, supra note 12, at 375 (“The question itself [of the optimal remedial scheme] is at bottom an empirical one, for which we have very limited data.”).
\end{flushleft}
Our inquiry is to ask what kinds of damages do parties actually contract for? If it turns out that sophisticated parties systematically contract for more or less than expectation damages, then that should cause us to question the claim that expectation damages are optimal.  

The barrier to conducting an empirical inquiry into what types of damages provisions parties actually use is that the current legal regime disfavors damages measures set above expectations, viewing them as illegal penalties. Sophisticated parties, therefore, will rationally avoid contracting for damages provisions unless they are safely at or below the expectations amount, so as to avoid the risk of court entanglement. To conduct an empirical inquiry, therefore, we need a setting where the penalty doctrine is not typically applied.  

The setting we use for our empirical inquiry is the prepayment of a debt by the borrower. Specifically, we look at bonds issued on the international debt market. This setting is simple in that one party, the lender, will have already fully performed at the time that the other, the borrower, seeks to repay the bonds ahead of the contracted-for maturity date, rather than continuing to pay the stated interest rate until maturity.  

A prepayment of debt (absent an explicit agreement to allow it) is a breach because the borrower’s early exit from the relationship potentially harms the lender, who had bargained for a certain return on her investment until the maturity of the bond. If prevailing interest rates are lower at the time of the prepayment than they were when the bond was issued, the lender will not be able to make a new investment in a company with a similar risk profile without accepting a lower coupon than she had originally bargained for or paying more for the investment.  

There are, of course, other ways in which the issuer might breach the debt contract—most obvious among them, by failing to make payments of interest or principal. With respect to these defaults, the parties negotiate remedies

31. Dietz, supra note 30, at 309.  
32. Id. at 314–15.
such as the ability to charge a default interest rate and accelerate the debt. However, we limit our inquiry to the remedy contracted for when the debtor is fully solvent and wants to pay off the bonds early. This could be because its fortunes have improved (perhaps because the market interest rates it faces have decreased and it can refinance at a lower rate) or because it is planning an acquisition transaction and does not want to be burdened by covenants that were in the old bond.

In the absence of any provision explicitly permitting prepayment, a lender could sue for breach if the borrower tendered the full payment of principal in advance of the scheduled maturity date and refused to pay interest according to schedule. But the foregoing is difficult to do (How does one force the lender to take back its money early?). Hence, most parties in this context, if they wish the option to prepay early, will contract for the amount the borrower will pay if she does wish to end the relationship early (i.e., an option to prepay). And because courts, at least outside of a bankruptcy context, treat prepayment clauses as alternative performance obligations and not damages provisions, this negotiation occurs away from the shadow of the penalty doctrine.

The foregoing bears emphasis because we are admittedly studying a provision that is not an actual damages provision. Rather, we are drawing insight from something that is economically equivalent to damages. However, this nuance is an important feature of our study because U.S. contracts are negotiated in the shadow of the penalty rule, making it difficult, if not impossible, to draw insights from actual damages provisions on what parties themselves would contract for absent the existing legal regime that disfavors damage measures higher than expectation damages. Hence, we look to a provision that is the economic equivalent of a liquidated damages contract term but is not viewed by the courts as such.

Among the advantages of this setting, for purposes of our endeavor, is that expectation damages are straightforward to estimate. Since this is a market setting where investors are largely indifferent as to the identities of the borrowers, so long as they have good estimates of the borrowers’ risk/return characteristics, the cost of substitute performance is easy to estimate if a debtor wishes to exit the relationship early. All that the investor has to do if the

33. Id.
34. As multiple scholars have shown, liquidated damages provisions are the economic equivalent of options. See, e.g., Paul G. Mahoney, Contract Remedies and Options Pricing, 24 J. LEGAL STUD. 139, 143 (1995); Scott & Triantis, supra note 17, at 1430.
borrower repays earlier than expected is to purchase a replacement bond with an identical risk and return profile for the remaining period of the contract. In a thick market, with active trading and sophisticated and diversified players, this is a manageable task.

Imagine, for example, a ten-year bond issued by El Salvador, a BB+ issuer, in 2015 with a ten percent coupon. Let us say that El Salvador wished to retire the bond in 2020, five years prior to maturity. Assuming that the investor was counting on receiving this stream of payments for another five years, it would be made whole by replacing the El Salvador bond with a bond of a different issuer with a similar risk profile, a similar coupon, and five years remaining until maturity. Expectation damages would equal the cost of purchasing the replacement security. Setting aside transaction costs, one can estimate this cost by calculating the present value, at the time of retirement of the El Salvador Bond of the remaining interest payments and the principal repayment at maturity, using a discount rate equal to the prevailing market interest rate for new ten year bonds issued by BB+ issuers (assuming El Salvador has maintained its BB+ rating).

An additional advantage of this setting is that one of the primary reasons given for why the expectation damages measure might be under-compensatory, that parties may have an incentive to over-rely, is not a problem here. The investor expected a particular stream of earnings but was factoring in the possibility of non-payment based on a certain risk profile and made decisions based on that risk-adjusted expectation. So, giving the investor a replacement investment with the same profile (or the funds necessary to purchase that investment) enables her to make the same sets of decisions she was planning to in reliance of her investment. In this setting, expectation damages should work well to put the investor in the same position she would have been in had the prepayment not occurred.

37. Id.
38. See Shawn J. Bayern & Melvin A. Eisenberg, The Expectation Measure and Its Discontents, 2013 Mich. St. L. Rev. 1, 19 (2014). Another reason sometimes given for why the optimal amount of damages should be different from expectation damages is errors in detecting breaches or enforcement. Richard Craswell, Instrumental Theories of Compensation: A Survey, 40 San Diego L. Rev. 1135, 1138–40 (2003). But in our case of a prepayment, there is neither much of a risk that the jilted party would fail to realize that there had been a prepayment nor a risk of non-enforcement.
39. In the context of a multi-creditor debt instrument, where the creditors are dispersed and might not be able to coordinate effectively in either detecting events of default or pursuing remedies, one
Here we ask, for a range of different types of issuers who issue bonds in the international bond market, what type of damage estimates issuers and investors in fact contract for in the event that the issuer wishes to exit the relationship early. Scott and Triantis and Posner—treat damages as ordinary contract terms—would predict heterogeneity in the pricing of the issuer call option (our proxy for damage measures). Conventional wisdom, by contrast, would predict expectation damages or something in its vicinity.

The issuers we examine range from issuers of junk bonds to investment grade bonds. And we look at them across a thirty-year period in the two dominant markets for such securities: New York and London. Using a data set of close to 1,500 hand-coded redemption provisions across multiple market segments, we ask: Do investors purchasing bonds from these issuers contract for call pricing that looks like expectations damages and, if not, what do they contract for?

In particular, we find the following:

- Parties in different economic settings contract for different call pricing;
- Many of these measures yield amounts significantly higher than the expectation damages measure; and
- Almost no one contracts for anything resembling expectation damages.

One of the more frequently used terms in the industry for the payment that the debtor is required to make in the event she wishes to redeem her bonds early is the “make-whole” payment. On its face, this sounds like expectation damages. It turns out, however, that what parties see as the “make-whole” amount is significantly different from the traditional legal understanding of the expectations measure and, in fact, is supra compensatory when compared to expectation damages.

To understand what we are seeing, especially with the increasing use of the supra compensatory “make-whole” remedy, we did a set of interviews with

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would generally expect that the measure of damages that parties would contract for would be above the standard expectation damages level to make up for the general underenforcement problem with multi-creditor instruments. See, e.g., Mitu Gulati & Marcel Kahan, Cash America and the Structure of Bondholder Remedies, 13 CAP. Mkt. L.J. 570, 574 (2018). However, prepayment of the bonds itself does not create such a creditor coordination problem—the default is clear and obvious—and we would not anticipate issuers to be compensated for under enforcement in this case.

40. See Posner, supra note 13, at 834–39; Scott & Triantis, supra note 17, at 1475–76.

industry actors in the high-yield corporate sector. The question we asked was simple: Why do you contract for call pricing that looks supra compensatory? The explanation we received suggests that investors in these debt contracts view the call price differently than conventional contract doctrine views damages. Their view is that they are entering into a joint enterprise with the borrower. If something unusually good happens to the borrower, and she is able to exit the relationship early, they want a share of that upside. After all, if something bad happens to the borrower and she is not able to pay in full, they suffer their share of the downside. In other words, the damage provision they want allows them to share the borrower’s return, not just get compensation, if something good happens to the borrower.

This paper proceeds as follows: Section II provides background on redemption provisions in the bond market. Section III describes the dataset. Section IV reports on the data. Section V discusses our findings from interviews. Section VI concludes.

II. SOME BACKGROUND ON DEBTOR EXIT OPTIONS

The legal literature on debtor exit options in bonds is small. And while there are snapshots of the exit options in small subsets of the market (e.g., high-yield US bonds), there is no systematic documentation of the range of debtor exit options utilized by different types of issuers.

Debt contracts typically have two sets of exit options. The first set is for creditors, and the goal is to enable creditors to exit the lending relationship if there are early indicators that the debtor is in financial distress. Upon the occurrence of one or more red flag conditions (Events of Default), and sometimes after a short grace period during which the debtor is allowed to cure the Events of Default, the creditors (if a specified percentage of them agree) can pull the plug on the relationship. That is, they can accelerate the debt, declaring it immediately due and payable.

42. The interviews used for this project involved senior practitioners and were conducted with the promise of anonymity under Duke University IRB protocol 1192.
44. See Gulati & Kahan, supra note 39, at 571.
45. See id. at 570.
Our focus is on the second set of exit options—those on the debtor side. Unlike the creditor exit options, which take effect when conditions for the debtor have deteriorated, debtor exit options typically become relevant when conditions have improved for the debtor. The debtor, which may have borrowed at a high interest rate and consented to onerous covenants when it was weak and in need of funds, is now in better condition and no longer wants to pay that interest rate or be subject to the onerous covenants. Here, the debtor is the one that wishes to exit the relationship. This right of the debtor to exit at a contractually pre-specified price is referred to as the “redemption” or “call” right.\textsuperscript{46} As described above, early redemption provisions are the economic equivalent of liquidated damages provisions.\textsuperscript{47}

As noted, there is little legal analysis of the range of redemption provisions that are used in the bond markets. Financial economics, however, has paid attention to these provisions.\textsuperscript{48} The basic corporate finance textbooks indicate that there is variation in redemption provisions; optional redemption is “sometimes permitted immediately, sometimes only some years after the bonds are issued, and often the payment required upon redemption depends on when the bonds are redeemed.”\textsuperscript{49}

We can view a bond that explicitly prohibits redemption prior to maturity as requiring specific performance. If a bond simply stated the maturity date of the bond while remaining silent as to whether the bond could be redeemed early

\textsuperscript{46} Debt contracts also frequently have what is called a “defeasance option,” which is a cousin of the redemption option. Here, the debtor is permitted to retire the bond if it deposits with the trustee an adequate set of treasury securities with the trustee to ensure that all required payments on the bonds are made. However, since defeasance does not involve the debtor exiting the relationship with the creditor altogether, we put it to the side for purposes of the analysis that follows. As far as we can tell, defeasance rights are little understood and rarely used. For one of the few analyses of the defeasance option, see C. Bienz, A. Faure-Grimaud & Z. Fluck, The Defeasance of Control Rights (Aug. 30, 2010) (unpublished manuscript), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1656089 [https://perma.cc/5LTG-JYQ6].

\textsuperscript{47} See supra p. 9.


or not, a court would presumably apply the default rule of expectation damages to determine the investor’s damages if the issuer paid the bonds back prior to maturity. However, many bonds include “no call” provisions, which explicitly state that the bond may not be redeemed early. This means that the issuer must pay interest on the principal amount of the bonds through the stated maturity date—a requirement for specific performance of the contract.

For bonds that may be redeemed early, the basic redemption provision specifies that in order to exit the relationship prior to the specified maturity date, the debtor is required to pay the creditor a premium. And the closer the redemption occurs to the maturity date, the lower the premium. For example, a bond carrying an interest rate of 7.5% might not permit redemption until the last four year prior to the bond’s maturity, and then at a premium, calculated as a percentage of the face value of the bond, according to the following schedule:

<table>
<thead>
<tr>
<th>Years Prior to Maturity</th>
<th>Premium</th>
</tr>
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<tbody>
<tr>
<td>4</td>
<td>5.625%</td>
</tr>
<tr>
<td>3</td>
<td>3.75%</td>
</tr>
<tr>
<td>2</td>
<td>1.875%</td>
</tr>
<tr>
<td>1</td>
<td>0.000%</td>
</tr>
</tbody>
</table>

This structure, often referred to as a fixed premium call option, was the structure of payments required in the famous Sharon Steel and Archer Daniels cases, staples of law school corporate finance classes.

As an economic matter, the call option at a fixed premium varies in value as a function of market rates of interest. When market rates decline, the redemption option becomes more attractive to the issuer and the inverse happens when market rates go up.

51. Kish & Livingston, supra note 18, at 95.
54. Mann & Powers, supra note 48, at 538 n.5.
55. BREALEY & MYERS, supra note 49, at 688–89.
Starting in the mid 1990s, a new formulation of the redemption provision began to appear in U.S. high-yield bonds.\footnote{56} This was the “make-whole” premium. The new make-whole provisions required the payment of the larger of par value and the present value of future principal and interest payments, calculated using a discount rate equal to the treasury rate plus a premium.\footnote{57} Because the discount rate was pegged to the treasury rate, which should reflect fluctuations in market rates, this formula reduced the changes in incentives resulting from fluctuations in market rates that are present with fixed premium formulas.\footnote{58} That said, variations in the company’s risk level remained a source of changing incentives, since the premium over treasury in the “make-whole” formula was almost always a fixed number of basis points.\footnote{59}

Gulati and Kahan report a snapshot of the types of redemption provisions in a sample of eighty-six relatively recent publicly-issued U.S. high-yield bonds.\footnote{60} All eighty-six bonds in their sample were callable.\footnote{61} In the 1995–2006 period, sixty percent of the bonds in their sample were still utilizing the traditional fixed-premium calls.\footnote{62} The first instance of a make-whole premium in their data shows up in 1998.\footnote{63} Things change considerably over the next ten years, in that by the 2007–2017 period, traditional fixed-premium call provisions seem to disappear.\footnote{64} Of their sample, Gulati and Kahan write that “bonds became predominantly callable either only upon payment of a make-whole premium (43 per cent of sample) or upon such payment in the initial years after issuance and subject to traditional fixed-premium calls in the later years after issuance (50 per cent of sample).”\footnote{65}

\footnote{56} Mann & Powers, supra note 48, at 535–36.
\footnote{57} Id. at 536.
\footnote{58} Amora Elsaify & Nikolai Roussanov, Why Do Firms Issue Callable Bonds? 5-6 (Nov. 15, 2016) (unpublished manuscript), https://repository.upenn.edu/cgi/viewcontent.cgi?article=1446&context=fnce_papers [https://perma.cc/4FZW-JAXD].
\footnote{59} For a discussion of the origins of this clause, that locates it in the aftermath of the 1983 Archer Daniels case, see Andrew Kalotay, Making Sense of the Make-Whole Call: From Its Origins to BABs, BOND BUYER (July 26, 2010), https://www.bondbuyer.com/opinion/making-sense-of-the-make-whole-call-from-its-origins-to-babs [https://perma.cc/KAJ5-N2RU]. But see Mann & Powers, supra note 48, at 535–36 (showing the origins of the make-whole provisions to be from the mid 1990s, a decade after the Archer Daniels case).
\footnote{60} Gulati & Kahan, supra note 39, at 578.
\footnote{61} Id.
\footnote{62} Id.
\footnote{63} Id.
\footnote{64} Id.
\footnote{65} Id.
Most relevant for purposes of our inquiry into how damages are set in the 
real world is the discount rate used to calculate the present value of future 
principal and interest payments in publicly issued bonds. A discount rate 
approximately equal to the issuer’s actual borrowing costs (the market rate for 
similar bonds being issued at the time of the redemption) would result in a 
make-whole premium that looks like expectation damages. But in Gulati and 
Kahan’s sample of high-yield issuers, the discount rate for future principal 
payments and interest payments was set at the treasury rate at the time of a call 
plus fifty basis points in a majority of cases, and in a few cases, at treasury plus 
twenty-five to forty basis points. This means that the call price for these bonds will almost necessarily be in excess of the value of the 
bonds had they remained uncalled. In other words, the remedy is supra 
compensatory as compared to expectation damages, which would give 
bondholders the present value of the bond, calculated using a discount rate equal 
to the market interest rate for similar bonds. The Fitch Rating service, when it 
discusses downgrades or upgrades of bonds with make-whole provisions, often 
highlights this feature, saying: “[U]se of this make-whole call provision 
remains highly unlikely since such a call would cost the qualified investment 
issuer a premium . . .”

In contrast to the discount rates used to calculate the make-whole premiums 
in the high-yield market, Powers and Sarkar report that discount rates for make-
whole premiums in the broader corporate bond market are considerably lower, 
at treasury plus fifteen basis points. Again though, given that not even the 
strongest companies are borrowing at fifteen basis points above Treasuries (at 
least a few hundred basis points is more likely), the point to take from this is 
that the redemption cost that a company has to pay under a make-whole 
provision is over-compensatory, as compared to the standard expectation 
damages measure.

66. Id. at 579.
67. See Moody’s Seasoned Baa Corporate Bond Yield Relative to Yield on 10-Year Treasury 
Constant Maturity, FEDERAL RESERVE BANK ST. LOUIS: FRED, (Dec. 29, 2017, 4:01 PM), 
https://fred.stlouisfed.org/series/BAA10Y [https://perma.cc/R763-S3LG].
68. Brown & Powers, supra note 41, at 4 (citation omitted).
69. Powers & Sarkar, supra note 48, at 463.
70. See Elsaify & Roussanov, supra note 58, at 2 (posing the question of why the vast majority 
of callable bonds have options that will never be “in the money”); Živka Afik, Gady Jacoby, David 
The perspective that finance scholars take on the variety of debtor redemption provisions is in line with the earlier theories mentioned in the Scott and Triantis article and the Klass article, in that they perceive parties using different options with different prices. Under this view, there is no single optimal damages measure; instead, the variation we see is a function of the different prices that investors and issuers are willing to agree to, based on each other’s characteristics.

III. DATA DESCRIPTION

In order to understand what types of issuer call/damages provisions different types of bond issuers and investors contract for in the event that the issuer has the means and the desire to redeem its bonds ahead of the scheduled maturity date, we examined 1,405 bonds issued over a thirty-year period. In compiling this dataset, we obtained data on four different subsets of the international bond market: bonds issued by emerging market sovereigns, bonds issued by quasi-sovereign entities, low-yield corporate bonds, and high-yield corporate bonds. These four categories of bonds reflect distinct risk profiles, which allows us to analyze variations among bonds that share a similar risk profile as well as differences across categories.

We reviewed offering documents for each bond in our dataset, hand coding the types of issuer redemption provisions observed, as well as details regarding issuer identity, issuer type, issue date, maturity date and governing law. As we describe in detail later, we observed a wide variety of issuer redemption provisions types, the most common of which were provisions that do not allow the issuer to redeem the bonds before maturity and those that allowed for

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71. See Scott & Triantis, supra note 17, at 1429–30; Klass, supra note 12, at 363.

72. See, e.g., Michael J. Alderson, Fang Lin & Duane R. Stock, Does the Choice Between Fixed Price and Make Whole Call Provisions Reflect Differential Agency Costs?, 46 J. CORP. FIN. 442, 442–44 (2017); John C. Banko & Lei Zhou, Callable Bonds Revisited, 39 FIN. MGT. 613, 617–19 (2010); Chen, Mao & Wang, supra note 48, at 605. Further, finance scholars find, somewhat counterintuitively, that investors demand a higher price for an exit option coupled with smaller damage amounts (since it is more likely to be exercised by the debtor) and a lower price for an exit option coupled with larger damage amounts (since they are less likely to be exercised by the debtor). Brown & Powers, supra note 41, at 3 n.1; see also Frank C. Jen & James E. Wert, The Effect of Call Risk on Corporate Bond Yields, 22 J. FIN. 637, 648–50 (1967); Kish & Livingston, supra note 18, at 99; Mann & Powers, supra note 48, at 535.
redemption at any time between issuance and maturity so long as the issuer was willing to pay a “make-whole” amount.

A typical make-whole provision says the following:

The Notes may be redeemed, in whole or in part, at the option of the Company, at any time or from time to time prior to stated maturity at a redemption price equal to the greater of the following amounts, plus, in each case, accrued interest to the redemption date: (1) 100% of the principal amount of the Notes to be redeemed; or (2) . . . the sum of the present values of the remaining scheduled payments of principal and interest on the Notes to be redeemed (not including any portion of any payments of interest accrued as of the redemption date) discounted to the redemption date on a semiannual basis at the Treasury Rate (as defined below) plus 20 basis points.73

For each make-whole provision we encountered, in addition to recording the existence of the provision, we also recorded the amount being added to the Treasury Rate (the “make-whole spread”) to determine the discount rate—in the example above, the make-whole spread is equal to twenty basis points.

Issuers in each category were selected randomly from Filings Expert and Bloomberg, which provide basic documentation on bond contracts. Table 1, below, reports the breakdown of our data set by number of issuances in each category of bond. Our quasi-sovereign bond data comes from debt issued by subnational government entities like provinces, states, and cities, and from government-owned or controlled entities (i.e., entities or companies more than fifty percent of the equity interests or fifty percent of the voting rights of which are owned by a government).74 We classified as low-yield corporate bonds any issuances by corporations with an “investment-grade” bond rating, meaning that they are considered low risk, conservative investments.75 For our purposes, high-yield corporate bonds were issuances by corporations with a sub-investment grade bond rating.


75. Investment grade bonds have a rating of “AAA” to “BBB-” as defined by Standard & Poor’s rating service, or range from Aaa to Baa3 as defined by Moody’s Investors Service. See Bond Ratings, FIDELITY LEARNING CTR., https://www.fidelity.com/learning-center/investment-products/fixed-income-bonds/bond-ratings [https://perma.cc/7HB6-GQXX].
Table 1. Total Issuances by Issuer Type

<table>
<thead>
<tr>
<th>Type of Issuer</th>
<th>Total Issuances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Yield Corporate</td>
<td>249</td>
</tr>
<tr>
<td>High-Yield Corporate</td>
<td>360</td>
</tr>
<tr>
<td>Sovereign</td>
<td>484</td>
</tr>
<tr>
<td>Quasi Sovereign</td>
<td>310</td>
</tr>
<tr>
<td>Total</td>
<td>1,405</td>
</tr>
</tbody>
</table>

IV. DATA ANALYSIS

As described earlier, a significant body of law and literature takes the view that expectation damages are the optimal default remedy for breach of contract.\(^76\) That is, the measure that the parties, acting rationally, would contract for if they were to actually negotiate a damages provision. If this view is correct, we would expect that in bond contracts, where sophisticated parties regularly contract for the economic equivalent of a liquidated damages provision, we should see a preference for expectation damages. That is, data collection should yield results showing that expectation damages are consistently the most contracted-for call option price both across time and at any given moment in time. However, this is not the case. Not only do we never find a clustering of data around anything that looks like expectation damages—neither across the thirty-year time period over which the bonds in our data cover, nor in any given year—we do not see any clustering that suggests an alternate optimal remedy. Instead, we find that the parties to these bond contracts negotiate bespoke call provisions that are particular to the issuer, the

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deal, and the market. Rather than choosing the supposedly optimal expectation damages measure, the parties to bond contracts choose a variety of other options, including those supposedly disfavored remedies like specific performance (no-call provisions) and supra compensatory damages (make-whole premiums calculated with discount rates that are below the issuer’s borrowing costs).

Indeed, against the common wisdom about expectation damages being optimal and, seemingly, the logic of the penalty rule, supra compensatory make-whole provisions are gradually becoming the dominant form of the issuer exit clause. Consistent with the data reported by Gulati and Kahan for a small data set of high-yield bonds and with Powers and Sarkar for their broader sample of corporate bonds, we find that across issuer types, sophisticated parties are often choosing to include make-whole provisions in their contract terms and, when they do, they are consistently setting the discount rate used to calculate the make-whole premium at a level that makes the make-whole premium supra compensatory.

As described in Section II, when the discount rate used to calculate the make-whole premium is set at a small spread above the treasury rate, the make-whole premium is (almost always) supra compensatory—meaning that it is higher than the amount the debtor would pay if it were paying expectation damages (the price it would pay to replace the bond with one of the same maturity, coupon, and risk profile). To see why, we look at the formula for present value:

\[ PV = \frac{FV}{(1+r)^n} \]

In this formula, \( PV \) is equal to present value, \( FV \) is equal to future value (i.e., the actual amount of the payments to be received in the future), \( r \) is equal to the discount rate, and \( n \) is equal to the number of periods. The discount rate is in the denominator, so performing the present value calculation with a discount rate of treasury plus fifteen basis points (a discount rate used in many

77. Afik, Jacoby, Strangeland & Wu, supra note 70, at 120–22; Elsaiy & Roussanov, supra note 58, at 2.
80. Elsaiy & Roussanov, supra note 58, at 5–7. In the rare case where a bond’s interest rate spread is less than the make-whole spread (i.e., interest rate spread is less than twenty-five bps), the make-whole formula compensates the bondholder at par, since the formula is written to have a floor at par. Id. at 5.
make-whole provisions for low-yield corporate bonds) will result in a higher present value amount than the higher discount rate of treasury plus seventy basis points (a more realistic estimate of the borrowing cost for an issuer of low-yield corporate bonds).

As an illustration, Table 2, below, reports the typical pattern we found in our data, where the cost to the issuer of redeeming the bond early is significantly higher than its borrowing cost (estimated at the time of issuance). We find that the discount rate used in the make-whole formula to discount future interest payment to the date of redemption is systematically in the range of around one fifth to one sixth of the actual borrowing rate for that issuer. And the latter rate would be what one would use if one were estimating expectation damages. Table 2 reports the data for three sets of recent issuances for the Comcast Corporation, an investment grade issuer, in 2020, 2019 and 2018. Column 2 gives us the spread to be added to the Treasury rate in the make-whole formula and Column 3 reports the actual borrowing rate for that issuer as compared to the Treasury rate.

81. See also Brown & Powers, supra note 41, at 3 n.1 (estimating this premium at roughly the same amount, over large dataset).
Table 2. Make-Whole Spread v. Interest Rate Spread Over Treasuries

<table>
<thead>
<tr>
<th>Date of Issue (Comcast Corporation)</th>
<th>Make-Whole Spread Over Treasuries (in basis points)</th>
<th>Interest Rate Spread Over Treasuries (in basis points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2/5/2020</td>
<td>15</td>
<td>83.6</td>
</tr>
<tr>
<td>2/5/2020</td>
<td>20</td>
<td>116</td>
</tr>
<tr>
<td>2/5/2020</td>
<td>25</td>
<td>146.7</td>
</tr>
<tr>
<td>2/5/2020</td>
<td>15</td>
<td>95</td>
</tr>
<tr>
<td>2/5/2020</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>10/29/2019</td>
<td>15</td>
<td>83</td>
</tr>
<tr>
<td>10/29/2019</td>
<td>15</td>
<td>93</td>
</tr>
<tr>
<td>10/29/2019</td>
<td>20</td>
<td>113</td>
</tr>
<tr>
<td>2/1/2018</td>
<td>15</td>
<td>80</td>
</tr>
<tr>
<td>2/1/2018</td>
<td>15</td>
<td>90</td>
</tr>
<tr>
<td>2/1/2018</td>
<td>15</td>
<td>107</td>
</tr>
</tbody>
</table>

To see what this means for an issuer contemplating a redemption of bonds, we consider the example of Pepsico’s 2017 ten-year bond, which has a coupon rate of 3.0% per annum, pays interest semi-annually, and specifies a discount rate equal to the treasury rate plus fifteen basis points in its make-whole
provision.\textsuperscript{82} If Pepsi decides to redeem the bond early—let’s say halfway into its life, five years before maturity—it has to pay the present value of all remaining interest and principal payments, discounted at a rate equal to interest rate of a comparable U.S. Treasury bond plus 0.15%. Assuming a rate of 1.50% for ten-year U.S. Treasury bonds at the time of redemption, the discount rate would be equal to 1.65% and Pepsi would be looking at a redemption price of $798 million. By contrast, if we do the same calculation using our more realistic estimate of prevailing interest rates at the time of redemption, the discount rate would be equal to 2.20% (treasury rate of 1.50% plus seventy basis points) and the redemption price would be approximately $778 million. In this example, the make-whole premium is about $20 million more than our estimate of expectation damages.\textsuperscript{83}

Given the supra compensatory nature of the make-whole premium, the make-whole provision creates a disincentive for issuers wanting to redeem their debt before maturity, precisely the thing that legal scholars and judges have assumed that rational parties would try to avoid. Yet, it is everywhere. Table 3 provides an overview of our data set, which shows the high incidence of make-whole provisions—all of which, as illustrated in Table 4, below, use a discount rate that reflects only a small spread over the treasury rate—moderate to high incidence of specific performance and no uses of any provision that looks like expectation damages. We next look at each issuer category in more detail.


\textsuperscript{83} An obvious question is whether such a payment would be illegal because it is equivalent to an unenforceable penalty. For the most part, this will not be an issue because the issuer (borrower) is the one choosing to pay it, since this is a call option that belongs to the issuer. But on rare occasion, such as in bankruptcy, the creditor might be the one demanding this payment. And there, the question of whether this is a penalty can come up. To illustrate, take the following from a 2017 S.D.N.Y. case: The liquidated damages formula of the Note is thus designed to provide Union with a guaranteed higher cash payout than a true makewhole measure, which would focus only on Union’s loss as a result of Vape’s failure to abide by the terms of the bargain. As a result, the Court determines that the so-called “Make-Whole” provision of the Note is nothing of the sort and is instead an unenforceable penalty. Thus, Union’s damages should be limited to expectation damages as a result of Vape’s failure to honor the notices of conversion.

Table 3. Dataset Overview

<table>
<thead>
<tr>
<th>Issuer</th>
<th># in set</th>
<th>Expectation damages(^{84})</th>
<th>Fixed Premium</th>
<th>Specific Performance(^{85})</th>
<th>Make-whole</th>
<th>Other (^{86})</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Yield Corporate</td>
<td>249</td>
<td>0.80%</td>
<td>0.8%</td>
<td>22.09%</td>
<td>74.30%</td>
<td>2.01%</td>
</tr>
<tr>
<td>High-yield Corporate (^{86})</td>
<td>360</td>
<td>6.1%</td>
<td>52.78%</td>
<td>5.83%</td>
<td>72.5%</td>
<td>2.23%</td>
</tr>
<tr>
<td>Sovereign</td>
<td>484</td>
<td>0.62%</td>
<td>0.41%</td>
<td>73.35%</td>
<td>22.11%</td>
<td>3.51%</td>
</tr>
<tr>
<td>Quasi Sovereign</td>
<td>310</td>
<td>0</td>
<td>0.65%</td>
<td>57.74%</td>
<td>35.16%</td>
<td>6.13% (^{87})</td>
</tr>
</tbody>
</table>

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84. This number includes offerings that do not include a prepayment provision because we presume that a court would award expectation damages if the lender sued the issuer for breach following an early redemption. It does not include the one instance where a make whole provision specified a premium that may approximate expectation damages (three hundred basis points, Bancor 3.8% Issuance from August 4, 2016). See infra note 92.

85. This number includes those offerings where it is explicitly stated that no redemption before maturity is permitted.

86. The high-yield issuers were unique in that many of them used a combination provision, which is frequently, a combination of a fixed premium up until a certain date, after which redemption was tied to a make-whole premium (or vice versa). As a result, these observations were recorded as containing both provisions for the purposes of this table, and that is why the “High-Yield Corporate” row is unique in that the percentages total over one hundred percent.

87. One of the “other” provisions contained a redemption provision that allowed redemption with payment of a make-whole where the premium was set at three hundred basis points. However, redemption was only allowed on a specified “call date.”
Table 4. Average Make-Whole Spread

<table>
<thead>
<tr>
<th>Type of Issuer</th>
<th>Low / High Make-Whole Spread (in basis points)</th>
<th>Mean Make-Whole Spread (in basis points)</th>
<th>Median Make-Whole Spread (in basis points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low-Yield Corporate</td>
<td>5 / 50</td>
<td>19</td>
<td>15</td>
</tr>
<tr>
<td>High-yield Corporate</td>
<td>25 / 100</td>
<td>53</td>
<td>50</td>
</tr>
<tr>
<td>Sovereign</td>
<td>15 / 50</td>
<td>34</td>
<td>30</td>
</tr>
<tr>
<td>Quasi Sovereign</td>
<td>10 / 300&lt;sup&gt;89&lt;/sup&gt;</td>
<td>40</td>
<td>40</td>
</tr>
</tbody>
</table>

A. Low-Yield Corporate Issuers

Low-yield corporate issuances, with their high bond ratings and low coupon rates, are relatively “safe” investments. One might assume, given this profile, that contracts for these bonds would reflect a standard, middle-of-the-road approach to issuer call provisions. That is, there is nothing so outlandish about making this investment, or, for that matter, any lack of suitable replacement investments, that would suggest that expectation damages would be inadequate compensation to an investor that receives a return of its principal prior to maturity. However, in our data set, only 0.8% of the low-yield corporate bonds provide for the equivalent of expectation damages in the case of an early redemption, and even then, the contract did not explicitly provide for it. In failing to include the provision in the contract, these parties left the prepayment penalty up to the courts, which we assumed defaults to expectation damages. Even for run of the mill, safe investments, parties are negotiating what should

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<sup>88</sup>. Rounded to nearest whole number.

<sup>89</sup>. Three hundred is an unusually high make-whole spread. It occurred only once in our data. There was one other instance where the make-whole spread was one hundred basis points. Other than those two, all make-whole spreads were under one hundred basis points.
happen in the event of an early redemption, and investors seem to reject expectation damages in favor of other measures.

Graph A. Redemption Provisions in Low-Yield Corporate Bonds

Low-yield corporate issuers contract for a few different issuer exit provisions: 22% of the bonds included provisions for specific performance and 0.8% provided for early redemption on a fixed premium schedule. The most prevalent by far, though, was the make-whole premium, which was in 74% of the bonds. These percentages, however, do not tell the whole story; while 22% of the bonds observed contracted for the specific performance equivalent (not allowing repayment on the bonds until maturity), almost all of those occurred before the year 2010, after which those provisions nearly disappear.

Graph A depicts the redemption provisions observed in bonds collected from 2010 through 2020. The lower portion reports the percentage of observances seen using the make-whole (in blue) as opposed to those which contracted for specific performance (in orange, in the upper portion, where relevant). As Graph A demonstrates, after 2009, the redemption provision seen almost exclusively was the make-whole.

Most issuers in our dataset who employ the make-whole provision introduced it in their bond issuances around 2010 (generally between 2006 and
2013). However, two tech companies, Apple and IBM, implemented the make-whole provision in the early 1990s.90

Most issuer call provisions we observed in low-yield corporate bonds contained make-whole spreads ranging from five to twenty-five basis points, clustered around fifteen basis points, as seen in Graph B, below. A calculation amounting to expectation damages would use a make-whole spread around one hundred basis points to approximate the issuer’s interest rate spread.91 But the make-whole spreads we observed are lower than that. Remembering that this number affects the denominator, this smaller spread means that the issuer is paying a higher premium when choosing to redeem its debt early.

Graph B. Distribution of Make-Whole Premiums in Low-Yield Corporate Bonds

Further, issuers in the low-yield sector were choosing varying make-whole spreads even within the same issuance. Take Microsoft’s issuance of $17 billion of debt on October 29, 2015, which was tranched into notes of different maturity dates and coupon rates.92 The spread used in the calculation of the make-whole premium varied from ten to twenty-five basis points, as seen in Table 5 (below). Not only are corporate issuers contracting for a supra

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90. Elsaify & Roussanov, supra note 58, at 2–3.
91. For an example of low-yield interest rate spreads, see supra Table 2.
compensatory make-whole provision and not expectation damages, but also instances such as these suggest that these provisions are not boilerplate. They look deliberately crafted on an individual deal basis, in a fashion akin to a pricing term.

Table 5. Microsoft’s $17B Issuance on 10/29/2015

<table>
<thead>
<tr>
<th>Issue Date</th>
<th>Coupon</th>
<th>Amount</th>
<th>Maturity Date</th>
<th>Make-Whole Rate to be added to Treasury Rate (in basis points)</th>
</tr>
</thead>
<tbody>
<tr>
<td>10/29/15</td>
<td>1.85%</td>
<td>$1.5B</td>
<td>2020</td>
<td>10</td>
</tr>
<tr>
<td>10/29/15</td>
<td>2.4%</td>
<td>$1.75B</td>
<td>2022</td>
<td>10</td>
</tr>
<tr>
<td>10/29/15</td>
<td>2.875%</td>
<td>$2.25B</td>
<td>2024</td>
<td>12.5</td>
</tr>
<tr>
<td>10/29/15</td>
<td>3.3%</td>
<td>$4.0B</td>
<td>2027</td>
<td>15</td>
</tr>
<tr>
<td>10/29/15</td>
<td>4.1%</td>
<td>$2.5B</td>
<td>2037</td>
<td>15</td>
</tr>
<tr>
<td>10/29/15</td>
<td>4.25%</td>
<td>$3.0B</td>
<td>2047</td>
<td>20</td>
</tr>
<tr>
<td>10/29/15</td>
<td>4.5%</td>
<td>$2.0B</td>
<td>2057</td>
<td>25</td>
</tr>
</tbody>
</table>

B. High-yield Corporate Issuers

As with low-yield bonds, few of the high-yield bonds in the dataset provide for a payment equivalent to expectation damages in the event of an early redemption. Again, assuming that failing to include a provision in the bonds amounts to contracting for expectation damages, only 6.1% of issuers decided to leave the courts with the power to issue prepayment penalties. Use of the make-whole was dominant among high-yield bonds, with 72% of the high-yield bonds in the dataset including make-whole provisions. However, these numbers do not tell the whole story: in the high-yield sector, it is not uncommon to see bonds incorporating both the make-whole and fixed premium provisions. Of the bonds observed, 34% used both of these provisions, and under 2% used a combination of all three—make-whole, specific performance, and fixed premium terms—in their early redemption provisions. Graph C (below) shows the comparison of provisions observed in our data from the years 2010 to 2020.
Graph C. Redemption Provisions in High-Yield Corporate Bonds

In contrast to the low-yield bonds, where we saw considerable variation, the majority of the make-whole provisions in the high-yield bonds fix the spread used in the discount rate at fifty basis points (see Graph D, below). With remarkable consistency, 92% of the high-yield bonds that contained make-whole provisions used fifty basis points as the spread over the treasury rate in calculating their make-whole premiums. Only 6.5% of the make-whole provisions used more than fifty basis points, and 1.5% used fewer than fifty.93 In the low-yield bonds, where make-whole spreads tend to stay below fifty basis points, we see a wider cluster, with consistent usage of five, ten, fifteen, and twenty basis points.

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93. Only twenty-one of these bonds used anything other than fifty basis points. Thirteen used one hundred, four used seventy-five, one used thirty-five, one used thirty, and two used twenty-five.
Graph D. Distribution of Make-Whole Spreads in High-Yield Corporate Bonds

High-yield bonds are, as their name suggests, riskier investments with the potential for a bigger payoff, and interest rates are higher, given that the investors are taking a gamble investing in these companies.94 This risk profile may account for the slightly higher spread we see in the make-whole discount rate compared to low-yield bonds. However, the spread of fifty basis points above treasury rates is nowhere near reflective of the actual cost of borrowing for high-yield issuers. To approximate expectation damages, the make-whole spread would need to be hundreds of basis points higher—likely around four hundred or five hundred basis points. Again, we have supra compensatory recoveries if the option is exercised.

C. Quasi Sovereign Issuers

Like the other issuers, quasi sovereign issuers also contract for call provision pricing that is different from expectation damages. Not only do we not find a clustering of the quasi-sovereign data around expectation damages equivalent provisions, but also that measure does not make an appearance at all.

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94. See discussion supra Section III.
for these issuers. Instead, quasi sovereign issuers opt for a variety of issuer exit provision types.

The most common redemption provision appearing in the early years of our dataset is the specific performance equivalent. These provisions dominated the quasi-sovereign market before optional redemption provisions gained popularity. Beginning in 2006, some quasi-sovereign issuers began adopting make-whole provisions, while others continued to choose specific performance equivalent provisions. By 2019, 24% of our quasi-sovereign issuers were using make-whole provisions. Across the whole dataset, the make-whole provision appears in 35% of the quasi-sovereign bonds. Almost all of the other issuers continued to employ specific performance equivalent provisions. The data also shows that, generally, once a quasi-sovereign issuer began employing make-whole provisions it continued to do so for subsequent issuances. Graph E (below) shows the percentage of provision types represented in the data by year since 2010, which demonstrates the variety in provision types.

Graph E. Redemption Provisions in Quasi-Sovereign Bonds

For those quasi-sovereigns that used make-whole provisions, make-whole spreads did not cluster around a single number, but instead varied, as shown in Graph F (below). Make-whole spreads ranged from fifteen to fifty basis points. In addition, individual quasi-sovereign issuers had varying make-whole spreads for different issuances. For example, in a single bond issuance in 2013, issuer Ecopetrol issued three separate tranches of differing maturities containing make-whole provisions with spreads set at forty, forty-five, and fifty basis points.96

Graph F. Distribution of Make-Whole Spreads in Quasi-Sovereign Bonds

Quasi-sovereign bonds as a market segment represent a variety of risk profiles,97 which may explain the variety in make-whole spreads in these bonds. However, as with other bond types, we see parties choosing either the supposedly “disfavored” specific performance measure or, increasingly, make-whole provisions with widely varying spreads rather than the predicted expectation damages measure.

97. See de Quinsonas, supra note 74, at 4–5.
D. Emerging Market Sovereign Issuers

With the inability of sovereign issuers to enter into formal bankruptcy proceedings, emerging market sovereign debt represents a unique risk profile for investors. And, unlike corporate and quasi-sovereign issuers, sovereigns may have fewer incentives to redeem debt early because they are not subject to the kinds of corporate changes, acquisitions, and the like, that often trigger a refinancing. Given these differences, we might expect to see a more conservative approach to damages contracting, with a concentration around an expectation damages equivalent call price. However, once again, few of the more than four hundred sovereign debt issuances in our data provided for call option prices resembling expectation damages. Again, assuming that neglecting to include a provision in the bonds amounts to contracting for expectation damages, only 0.62% of issuers left the courts with the power to dole out expectation damages. 98

Instead of expectation damages, sovereigns contracted for an array of other damages measures. While the “no call” provision (equivalent to specific performance) was the most common, sovereigns also employed make-whole provisions, fixed premium call provisions, and a number of truly custom options. One group of bonds included a rare redemption at par provision, allowing the sovereign to call its debt at any point in the life of the bond at the face value of the bond. Another bond allowed the sovereign to redeem the bond only on specific dates. 99

Sovereign issuers had the lowest rate of make-whole adoption of any category in our dataset with only 22% of issuers having ever used a make-whole by 2019. In total 22.02% of the sovereign bonds contained make-whole provisions.

Like the quasi-sovereigns, once sovereign issuers began employing make-whole provisions, they generally continued to do so in the majority of their issuances. However, this is not universally true. Argentina employed a make-whole provision in its celebrated 2017 Century bond and yet has not continued

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98. Bonds were considered not to have contracted for redemption at all if they failed to specify the ability or inability (“no redemption before maturity,” “no issuer call,” “Issuer will not redeem before maturity,” etc.) in either the prospectuses or offering circulars. See supra Table 3.

99. E.g., Republic of Columbia Prospectus Supplement, SEC: EDGAR ARCHIVES (Sept. 14, 2012), https://www.sec.gov/Archives/edgar/data/917142/000119312512395579/d411998d424b5.htm [https://perma.cc/QF92-SP8S] (“Colombia will have the right, at its option, to redeem the bonds in whole or in part, on December 21, 2022, or at any time thereafter, at a redemption price equal to 100% of the principal amount of the bonds to be redeemed, plus accrued and unpaid interest and additional amounts, if any, to, but excluding, the redemption date.”).
to employ make-whole provisions in its other bonds issued over the ensuing years. Additionally, Brazil and Uruguay issued some debt without make-whole provisions (including, for Uruguay, one issuance consisting of one tranche providing for a make-whole and another tranche providing for specific performance) after their first use of the make-whole. Brazil has consistently used the make-whole since 2012, with the exception of one issuance in 2014, which provided for the specific performance equivalent. The increasing use of the make-whole and the relative tenacity of specific performance in this market can be seen in Graph G (below).

Graph G. Redemption Provisions in Sovereign Bonds

Among sovereign issuers, the spread in the make-whole discount rate varies. Among one hundred seven make-whole provisions in sovereign bond issuances, the spread ranges from fifteen to fifty basis points, shown in Graph H (below).
In emerging market sovereign bonds, make-whole premiums appear to be specific to the deal, rather than the issuer, as individual sovereign issuers had different make-whole spreads for different issuances even within short time periods. For instance, Mexico issued two bonds of two tranches each on January 31, 2020. These bonds, issued on a single day, had varying maturity dates, coupon amounts, and different spreads for the make-whole discount rate. The make-whole spread for these tranches varied from twenty-five to forty basis points. Not only are sovereign issuers contracting for a make-whole provision other than the expectation damages equivalent, but also instances like these indicate that sovereigns are deliberately tailoring these damages provisions.
Table 6. Mexico’s 1/31/2020 Issuances

<table>
<thead>
<tr>
<th>Issue Date</th>
<th>Coupon</th>
<th>Amount</th>
<th>Maturity Date</th>
<th>Make-Whole Spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/31/2020</td>
<td>1.125%</td>
<td>€1,250,000,000</td>
<td>2030</td>
<td>25</td>
</tr>
<tr>
<td>1/31/2020</td>
<td>2.875%</td>
<td>€500,000,000</td>
<td>2039</td>
<td>40</td>
</tr>
<tr>
<td>1/31/2020</td>
<td>3.25%</td>
<td>$3,069,068,000</td>
<td>2030</td>
<td>25</td>
</tr>
<tr>
<td>1/31/2020</td>
<td>4.5%</td>
<td>$800,000,000</td>
<td>2050</td>
<td>30</td>
</tr>
</tbody>
</table>

A broader review of Mexico’s debt issuances illustrates that issuer exit provisions are far from uniform. Mexico is a sophisticated and frequent issuer of sovereign debt. In Mexico’s debt issuances from 1981 to 2019, it employed both the specific performance equivalent and make-whole provisions. After its adoption of make-wholes in 2007, its make-whole amounts ranged from fifteen to forty basis points. The amounts did not increase or decrease consistently over time but varied from bond to bond. This suggests that a sophisticated party varies its contract terms to suit different circumstances. Further, suggesting that damages terms are tailored to their deals and their parties, several “Brady Bonds” issued by Mexico contain redemption at par provisions. Issuer redemption at par provisions are rarely seen in our data set, but it was chosen as the appropriate measure for several of this particular bond type. This variation in make-whole amounts and


103. For the basics on Brady Bonds, see Buckley, supra note 102.
redemption terms used more broadly by sophisticated parties indicates that negotiated damages terms are specific to individual bargains.

To reiterate, if expectation damages are the optimal measure of damages, then we would predict that most of the parties who explicitly contract for damages would cluster around the expectation damages equivalent or something like it. However, almost none of the issuers and investors in any of the categories of bonds we examined contract for anything resembling expectation damages (although, in a wonderful bit of lawyer speak, they do call their supra compensatory call provisions “make-wholes”).

Instead, parties contracted for a range of different exit provisions including no-calls, make-wholes, and other more bespoke options like make-wholes that are only applicable on a specific optional call date, par redemption after a specific date, and fixed premium calls.

V. SOME REALISM FROM CONTRACT DRAFTERS

To get more traction on what we were seeing in the data, and to impose a reality check on our findings, we did a set of thirty interviews with lawyers who draft these contract provisions. We reached out by e-mail to forty-three transactional lawyers in the high-yield and sovereign debt fields, all of whom work at firms whose documents are in our dataset. 104 Thirty of the lawyers we reached out to agreed to talk to us. We asked them one simple question: 105 Why were issuers contracting to pay supra compensatory amounts in their call provisions instead of an expectation damages equivalent?

There were two primary reasons for this reality check. First, we wanted to see how the lawyers viewed the “make-whole” provisions, in particular. Did they see them as supra compensatory or merely compensatory (the latter being equivalent to expectation damages)? 106 Second, if it was the former, why were

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104. Potential contacts were identified through their attendance at a New York Bar association event, at which one of us had been invited to speak on the topic of the make-whole provision in high-yield bonds and a controversial 2016 case. In addition, we also used the Duke alumni network for graduates who work in the debt markets and high-yield bond issuances, specifically. For more detail, see Gulati & Kahan, supra note 39. As per the conditions on our research protocol, we promised our respondents anonymity. The Duke University Human Subjects Research protocol number is 2144.

105. We were also asking questions relating to a different project on contract evolution. See id. (reporting on the thirty interviews one of us did with lawyers).

106. We were also curious about whether any of our respondents would make a distinction between call options and damages provisions. All of those individuals we spoke to, though, seemed to understand the two concepts as intertwined as an economic matter. See, e.g., Sam Lawand, Make-Whole Claims in Bankruptcy, HARV. L. SCH.: HARV. L. SCH. BANKR. ROUNDTABLE (Apr. 30, 2019),
they continuing to use these provisions in the wake of the *Cash America v. Wilmington Savings* case that created a risk that the issuer would be liable to pay this supra compensatory amount even where the issuer did not call the bonds?\textsuperscript{107} This article is not about contract drafting changes in the wake of *Cash America*, but the answers we received on that matter are illuminating here, since they get to the reason why parties negotiate, *ex ante*, for supra compensatory remedies.

The answers we received are summarized below. We do not offer these as proof of our data. The lawyers could have been spinning us. However, we think that it useful to consider how this subset of lawyers talk about the question of damages for prepayment.

None of our respondents questioned the view of the typical “make-whole” as supra compensatory. The explanation for why the remedy was set at a supra compensatory level in the corporate context was that there are sometimes instances where the conditions for the issuer improve so dramatically that it is willing to pay a big premium to get out of onerous covenants. The standard example we were given here was a lucrative merger opportunity for an up-and-coming high-yield company with a big established blue chip (a low-yield company), where the latter does not want to be subject to onerous covenants. Less likely, but also possible, might be the use of this type of provision for a very long maturity bond, where there was the possibility that the borrower’s market position might improve so dramatically as to make paying the make-whole premium worth it.\textsuperscript{108}

The foregoing explanations surprised us because they are not part of the standard discussions in the literature of damages provisions. Practitioners explained that their clients on the credit side wanted these provisions because they wanted a part of the upside in those situations where the issuer’s fortunes

\textsuperscript{107} See Gulati & Kahan, supra note 39 (focusing on the study of the drafting responses to the *Cash America* case).

\textsuperscript{108} We heard this explanation specifically in the context of the Argentine one-hundred-year bond issued in 2017, the longest duration bond in our dataset.
improved dramatically (which would be the only situation in which that issuer would be willing to pay an amount as high as the typical “make-whole”).

One respondent explained:

Creditors take the view that since they suffer the downside when the borrower’s fortunes tank, they should get some of the upside, if the borrower’s fortunes improve a lot. And they are willing to pay for it. Issuers are rarely in the situation where they are willing to pay a make-whole amount, so this is a low probability event . . . the cost of asking for this provision is probably not much.  

Another respondent chided us:

You academics are always looking for answers in the wrong places. Looking at contract terms doesn’t tell you what actual contracting parties do in the real world. Almost no one ever pays the make-whole amount, unless there is a big merger in the offing. Firms seeking to retire their bonds have other cheaper options that they tend to use: market buybacks and tender offers. The make-whole sets a ceiling. But I’ve never had a client that has actually paid it. It is too high.

To reiterate, not a single lawyer that we talked to, when asked about what goal they were contracting towards, invoked the standard mantra that law students are taught—often at the very start of their 1L contracts classes—that the jilted counterparty in a contract breach case will want to be put in the position she would have been in had the contract been performed. Instead, what the investor wants is to share in the good fortune that caused the issuer to want to exit the deal.

109. In his comments on this paper, Victor Goldberg kindly pointed out that one sees a similar phenomenon in many “recapture clauses” in commercial real estate leases, where the lessor gets some of the upside from the owner being able to lease the property out at a bigger profit. E-mail from Victor P. Goldberg, Professor of Transactional L., Colum. L. Sch., to Mitu Gulati, Professor of L., Duke U. Sch. of L. (May 20, 2020, 2:56 PM EST) (on file with author).

110. The fact that this is a low probability event that comes into play in situations where the issuing company’s fortunes improve dramatically is echoed in the Brown & Powers article. See Brown & Powers, supra note 41, at 3 n.1, 4 n.3.

111. See Triantis, supra note 10, at 645–46.

112. This explanation is consistent with the argument made by Goetz and Scott in 1977 that supra compensatory liquidated damages provisions, which allocate efficiency gains from a breach to the non-breaching party, provide a setting where the parties are able to negotiate to divide the gains from a breach, whereas a compensatory damage remedy ensures that all efficiency gains go to the breaching party. See Goetz & Scott, supra note 21, at 567.
VI. CONCLUSION

For some years now, a subset of contracts scholars including Robert Scott, George Triantis, Eric Posner, and Greg Klass have been questioning the assumption that there exists an optimal measure of damages.113 We hope to have demonstrated that there is empirical support for that skepticism.

In at least one multi-trillion-dollar global market, sophisticated parties systematically contract for a wide range of call option prices. Given that these call options are the economic equivalent of liquidated damages, we take this finding to say that parties in this market favor damages measures that conventional doctrine and theory tell us are disfavored.

We acknowledge that there may be reasons other than economic optimality to use a measure such as expectation damages as the default rule. A story could be told, for example, about how the expectation measure operates as a bargains-forcing default, imposing a less favored term on those parties who do not give the matter of damages adequate consideration ex ante and, therefore, provides incentives for parties to be more careful in their contract drafting. That, however, is not the primary justification of the expectation measure that we have seen being made in the literature.114 Future scholarship may resolve whether the expectation measure of damages should remain the default rule. But, the increasing incidence of supra compensatory call provisions in bond contracts negotiated by sophisticated parties seems to raise questions about the barrier to so called “penalty” damages in liquidated damages provisions.

In conclusion, we note two of the possible critiques of our analysis. First, as noted at the start of the paper, the provisions we examine are not actual damages provisions, but their economic equivalent. However, our goal in this project was to examine what terms parties would agree to, ex ante, in a classic breach situation, where one party wants to be let out of the deal because it has found better opportunities. As an economic matter, that is what the issuer calls is. It is the payment that the parties agree to at the outset in the event that the issuer, at some later stage, wishes to end the transaction early.

113. See supra Sections I, II (discussing the work of these scholars). See also George Triantis, Promissory Autonomy, Imperfect Courts, and the Immorality of the Expectation Damages Default, 45 Suffolk U. L. Rev. 827, 835 (2012) (“To many . . . the expectation measure of damages is the desirable default contract remedy, because most parties would consent to it.”).

114. Cf. Martin Davies & David V. Snyder, International Transactions in Goods: Global Sales in Comparative Context 179 (2014) (raising, as a hypothetical matter, the possibility that the consequential damage measure might be a penalty default).
Second, a critic might argue that perhaps the reason we do not see expectation damages contracted for more extensively is precisely that their use is such a well-established default. So much so that parties know that judges will award this measure of damages in all cases where they do not contract for it. Our response is that we look across a wide range of settings in the debt markets and in fewer than ten percent of them do we see parties simply not addressing early repayment of the bonds.

It remains the fact that we have only looked at a single market, even if it is a multi-trillion-dollar one. Maybe, if studies of the types of damages parties want are done in other industries, we would find widespread examples of contracting for expectation damages. However, based on anecdotal observation across a range of settings from airline ticket contracts to gym memberships, we suspect not. But, all of that is to say that more study is necessary. If the findings of those other studies support ours, maybe it will be time that the law reconsiders its preference for the expectation damages default rule.113

115. Triantis, supra note 10, at 656, 668, 670.