Risk, Reimagined:

The Untold Story of Liability Laddering in Modern Commercial Dealmaking

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In commercial contracting, bargaining parties regularly allocate risk in various ways, including contractual limitations of liability. However, it can be difficult to appropriately apportion responsibility for high-risk contingencies such as data breach. A seller may be unwilling to accept uncapped liability for a contingency whose cost could exceed the expected value of the transaction. Conversely, a buyer may be unwilling to live with only a general damages cap established as a rough-and-ready compromise for more ordinary contingencies. To surmount this impasse, which typically arises toward the end of a negotiation, deal lawyers have begun to craft elevated dollar caps, or "super caps," to account for specified high-risk contingencies.

This Article draws on interviews with a dozen commercial dealmakers and insights from the contemporary literature on contract design to identify and examine previously unexplored multi-tiered systems of contractual damages caps, or "liability ladders." This Article contends that super caps, which represent rungs on a liability ladder, should not be deployed as a last-minute patch but recognized as an integral part of a commercial deal's overall allocation of risks and responsibilities. Introducing the possibility of multi-tiered liability caps earlier in the bargaining process would maximize efficiency, encourage appropriate incentives, and amplify value creation.

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INTRODUCTION

Millions of computers crashed on July 19, 2024, after cybersecurity firm CrowdStrike released a defective software update.[1] The global disruption impacted industries including airlines, banks, hotels, and healthcare, with early estimates approximating overall damages in excess of $5 billion.[2] Delta Air Lines alone claims the outage cost it more than $500 million.[3] The billion dollar question—who will pay for these catastrophic losses—will likely turn, in large part, on limitation of liability provisions in CrowdStrike's contracts.[4] While the specific language of these contracts will vary from customer to customer, CrowdStrike has emphasized that its contractual liability to Delta is capped "in the single millions."[5]

The limitation of liability clause, setting forth an express agreement to fence in the potential liability exposure of one or more parties to a contract, is of central importance to most commercial agreements.[6] The CrowdStrike outage and its legal fallout illustrate the

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1. Joel Khalili, *CrowdStrike Faces a Potential Tsunami of Lawsuits. Only the Fine Print Can Save It, Experts Say*, WIRED (Aug. 7, 2024), https://www.wired.com/story/crowdstrike-outage-microsoft-delta-lawsuits-analysis/ [https://perma.cc/3NS7-YAR3].

2. *Id.*

3. David Shepardson, *CrowdStrike, Delta Sue Each Other Over Flight Disruptions*, REUTERS (Oct. 28, 2024), https://www.reuters.com/legal/crowdstrike-delta-sue-each-other-over-flight-disruptions-2024-10-28/ [https://perma.cc/F89H-45FW].

4. Khalili, *supra* note 1.

5. Ramishah Maruf, *CrowdStrike Fires Back at Delta, Claiming the Airline Ignored Offers of Help During Service Meltdown*, CNN (Aug. 5, 2024), https://www.cnn.com/2024/08/05/business/crowdstrike-fires-back-at-delta/index.html [https://perma.cc/8SJE-79ZP]. In December 2024, CrowdStrike moved to dismiss a lawsuit filed against it by Delta, "arguing that the airline's litigation was an attempt to circumvent the contract between the two companies." Rohan Goswami, *CrowdStrike Moves to Dismiss Delta Air Lines Suit, Citing Contract Terms*, CNBC (Dec. 17, 2024), https://www.cnbc.com/2024/12/17/crowdstrike-moves-to-dismiss-delta-suit-citing-contract-terms.html [https://perma.cc/4SGH-K5XM].

6. Much has been written, adjudicated, and legislated regarding the enforceability of contractual limitations on liability. *See, e.g.*, Michael Pillow, *Clashing Policies or Confusing Precedents: The 'Gross Negligence' Exception to Consequential Damages Disclaimers*, 4 WM. & MARY BUS. L. REV. 493, 495 (2013) (analyzing

inherent tension and immense stakes of such a clause in commercial contracts.[7] As incident costs rise, contracting parties and the agreements they design must adjust and evolve. Limitation of liability provisions, especially those in technology agreements and other contracts with significant data management features, are among the provisions most heavily impacted by the modern risk regime. Where parties on both sides of a bargain want to limit their exposure in this new, high-risk landscape, contract designers must rewrite bargaining playbooks. This Article will investigate in depth, for the first time, pathbreaking shifts in liability limitation over the last decade.

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enforceability—and exceptions to enforceability—of limitations of liability under the Uniform Commercial Code ("UCC")); Thrash Com. Contractors, Inc. v. Terracon Consultants, Inc., 889 F. Supp. 2d 868, 872–73, 882 (S.D. Miss. 2012) (identifying factors that courts have used to determine whether a particular limitation of liability clause is enforceable); CDK Glob., LLC v. Tulley Auto. Grp., Inc., 489 F. Supp. 3d 282, 315 (D.N.J. 2020) (outlining the factors that determine whether a limitation of liability clause is unconscionable); U.C.C. §§ 2-718, 2-719 (A.L.I. & UNIF. L. COMM'N 1951). Of note, some part of the UCC has been adopted by all 50 states and the District of Columbia, with some variety in substance and organization. *See, e.g.*, *In re* Edison Bros. Stores, Inc., 207 B.R. 801, 809 n.7 (Bankr. D. Del. 1997). As such, when applying UCC provisions to specific facts, *e.g.*, questions of limitation of liability enforceability, jurisdiction-specific analysis is paramount. Many commercial contracts' limitation of liability provisions expressly acknowledge the fact that some jurisdictions do not allow exclusion of liability for certain types of damages, such as personal injury or death, and state that in such instances, liability will be limited to the fullest extent permitted by applicable law. Furthermore, special enforceability considerations may apply to limitation of liability provisions in certain types of contracts, such as consumer agreements. *See, e.g.*, Motorists Mut. Ins. Co. v. ADT Sec. Sys., No. 14799, 14803, 1995 WL 461316, at *4 (Ohio Ct. App. Aug. 4, 1995) (explaining that courts will examine contract terms' harshness and the parties' relative experience and bargaining power in determining whether a contract is enforceable, and that "the commercial plaintiff is held to a higher standard than the ordinary consumer" (citing Chemtrol Adhesives, Inc. v. Am. Mfrs. Mut. Ins. Co., 537 N.E.2d 624, 638 (1989)); E.B. Harvey & Co., Inc. v. Protective Sys., Inc., No. 840, 1989 WL 9546, at *4–5 (Tenn. Ct. App. Feb. 10, 1989) (discussing considerations of adhesion and unconscionability in consumer contracts). Agreements involving certain industries and professions may likewise require unique enforceability analysis. *See, e.g.*, Soja v. Keystone Trozze, LLC, 106 A.D.3d 1168, 1170 (N.Y. App. Div. 2013) (considering enforceability of limitation of liability clause in homeowner contract with architect); Estey v. MacKenzie Eng'g Inc., 927 P.2d 86, 89–90 (Or. 1996) (considering enforceability of limitation of liability clause in homeowner contract with engineer). The nuances of liability limitation enforcement in these specialized areas, like liability limitation enforceability more generally, are the subjects of regular judicial, legislative, and scholarly analysis and are beyond the scope of this Article. This Article's focus is arms' length commercial transactions between sophisticated business parties, or business-to-business ("B2B") transactions. As the purpose here is to explore modern usage of super caps in B2B commercial agreements, apply existing theory to the super cap trend, and suggest a reimagining of deal chronology and information sharing based on market and theoretical observations, this Article will sidestep a foray into enforceability analysis generally and will assume, for purposes of the present discussion, that the limitations of liability (and, by extension, caps and super caps) discussed here are, *inter alia*, neither unconscionable nor in violation of applicable law or public policy, and would be upheld by applicable courts. The fundamental significance of enforceability, however, must not be ignored; indeed, *ex post* enforcement of contracts "helps motivate parties to use these efficient tools." Cathy Hwang, *Deal Momentum*, 65 UCLA L. REV. 376, 384 (2018).

7. "Commercial contracts" are defined, for purposes of this Article, as contracts effecting commercial arrangements between businesses (i.e., B2B transactions), including services agreements, software agreements, and sale of goods agreements. Of note, different sources define "commercial contracts"—and subsets of commercial contracts—in different ways. As will be explored in more detail in Part I.A, many sources distinguish technology and software deals, including software-as-a-service ("SaaS"), from other commercial transactions, such as professional services arrangements. Commercial contracts in this context are to be distinguished from consumer contracts, i.e., agreements between a business party on the one hand and an individual consumer on the other, and further distinguished from contracts effecting other transactions between companies such as mergers and acquisitions ("M&A"), commercial lending, and venture capital financing.

Limitation of liability clauses in commercial contracts typically constrain both the type and amount of damages available to an injured party. Limits on the type of damages available are ordinarily imposed by expressly excluding consequential and punitive damages, while limits on the amount of damages are imposed by placing caps on the monetary damages one or both parties may recover from the other under the contract.[8] This Article's focus is on monetary damages caps and variations thereof; a cap "limits the provider's liability to a defined dollar figure."[9] Direct damages caps may be calculated in a number of ways and, in commercial agreements, are commonly pegged to a fixed dollar amount, a multiple of the contract price, or a combination of the two using a "greater of" or "lesser of" construct. From the perspective of a seller, the logic of monetary caps is clear: a transaction has limited monetary value, and accepting unlimited liability could easily result in deal risk outweighing reward.[10] Conversely, a buyer will expect that the seller, being better positioned to control performance and compliance, will stand behind the applicable product or service by agreeing to take on more risk vis-à-vis unlimited or materially expanded liability.[11] Impasse on these fundamental deal points is common, stakes are high, and bargaining discussions are often charged due to outcome significance and deal fatigue.[12]

Despite these challenges, sophisticated parties often achieve compromise through a series of mutual and nuanced concessions, many of which relate to exceptions (also referred to as exclusions or carve-outs) from liability limitations. The seller will often require

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8. *See, e.g.*, Geoff Sutcliffe, *When the Limitation of Liability Is Not So Limiting*, ABA (June 30, 2021), https://www.americanbar.org/groups/intellectual_property_law/resources/landslide/archive/when-limitation-liability-not-so-limiting/ (on file with the *Journal of Corporation Law*) (discussing ways that parties may creatively limit damages).

9. DAVID W. TOLLEN, THE TECH CONTRACTS HANDBOOK: CLOUD COMPUTING AGREEMENTS, SOFTWARE LICENSES, AND OTHER IT CONTRACTS FOR LAWYERS AND BUSINESSPEOPLE 196 (A.B.A. Section of Intell. Prop. L., 3d ed. 2021).

10. *See, e.g.*, Brian R. Buckham & Adam J. Richins, *The Final Hour: Drafting Away Liability*, 55 ADVOC. 21, 21 (2012) (discussing the perspective of the seller in a transaction); Zoom Interview with Firm Attorney II (Oct. 26, 2023) (observing that, if a seller takes on unlimited liability, the price that seller would need to charge to provide adequate risk coverage would be so high that the applicable deal would be unlikely to get done, and that liability limitations help ensure the parties' liability is appropriately allocated); TOLLEN, *supra* note 9, at 195 ("[A] low-cost software program can *ruin* a half-billion-dollar bridge or a billion-dollar asset portfolio, if it doesn't work. The provider couldn't do business if every $10,000 sale generated meaningful odds of a billion dollar liability, or even a half-million dollars. So, the provider needs limits of liability.") (emphasis in original). A seller is typically at higher risk of performance-related action or inaction (such as contractual breach) that could result in damage or injury to the counterparty; conversely, the primary obligations of a buyer or customer often focus on payment and reasonable cooperation. This is, of course, an overgeneralization that does not account for various co-manufacturing, value-added reseller, and other more elaborate commercial arrangements pursuant to which both parties perform material services or provide goods, components, or raw materials; under such arrangements, considerations and positions categorized hereunder as "seller's" might apply to either or both parties, depending on context.

11. *See* Buckham & Richins, *supra* note 10 (presenting a hypothetical (but typical) argument by buyer's counsel in a $2 million deal: "You manufacture the product; you control the risk and liability. Neither common law nor statutory law establishes limits of liability for foreseeable damages. I am only asking what is allowed under the law." (citing Hadley v. Baxendale, 9 Ex. 341, 156 Eng. Rep. 145 (1854) and I.C. § 28-2-719)).

12. *Id.* This Article will discuss the efficiency costs of deal fatigue and bargaining parties' tendency to wait until the end of negotiations to address the most controversial provisions in an agreement, including limitation of liability provisions.

monetary caps and consequential damages waivers to constrain liability risk,[13] and the buyer might agree in concept but insist that enumerated high-risk items be excluded from one or both limitations.[14] In turn, the seller will likely balk at a laundry list of exclusions leaving its liability for specified risks uncapped. Wary sellers will argue that such exposure eviscerates previously negotiated liability limitations. Back and forth. Enter super caps.[15] The super cap maneuver (i.e., applying elevated dollar caps to specific high-risk contingencies) makes sellers' high-risk obligations, such as those around data security, "more meaningful, while allowing vendors to retain the ability to quantify contractual risk against expected revenue."[16]

This Article coins the phrase "liability laddering" in reference to contractual damages caps featuring multiple levels, or rungs: a standard cap and one or more higher super caps. The introduction of super caps in a contract establishes a bifurcated (or otherwise multi-tiered) monetary damages cap paradigm pursuant to which parties assign elevated caps to specified liabilities and a standard cap to everything else not otherwise excluded.[17] By way of example, in a professional services agreement, the general direct damages cap might be 1x fees paid or payable under the contract in a trailing 12-month period; violation of applicable law, breach of confidentiality provisions, personal injury (including death) or property damage arising from the negligence of a party, intellectual property infringement, and damages arising from the willful misconduct or gross negligence of a party might be excluded altogether from the cap;[18] and damages arising from a party's failure to comply

13. *See, e.g.*, Zoom Interview with Firm Attorney V (Dec. 12, 2023) (referring to a seller's initial attempt to disclaim consequential and similar damages, and establish a monetary damages cap, as "limitations of liability 101").

14. The "list of usual suspects" most often carved out from liability limitation includes intellectual property infringement; breach of data and information security obligations; breach of confidentiality obligations; certain indemnification obligations; death, personal injury or property damage arising from the negligence of a party; and willful misconduct, gross negligence, or fraud of a party. *Id.* This list is, of course, illustrative only; many contracts, even those including exceptions to liability limitations, will not feature all of these carve-outs. *Id.* On the other hand, practitioners also identified certain warranty breaches, tax issues, employee misclassification, and breaches of anti-bribery and anti-corruption requirements as additional candidates for exclusion from standard damages caps. Zoom Interview with Firm Attorney II (Oct. 26, 2023).

15. *See, e.g.*, Zoom Interview with Firm Attorney IV (Dec. 5, 2023) (observing that it is not yet standard practice for either party to offer a super cap in the first draft; instead, if the seller prepares the first draft, it will include limitations of liability, buyer will propose carve-outs in its responsive markup, and seller will then propose a super cap).

16. Gerard M. Nussbaum, Elizabeth Hodge & Scott Bennett, *Securing Connected Devices in Health Care: Taking Proactive Action*, 12 J. HEALTH & LIFE SCIS. L. 84, 115 (2019). Of course, risk-versus-reward projections are far from straightforward. A seller convincing a buyer to concede to a super cap on high-risk obligations for which the seller's liability would otherwise be unlimited is a significant achievement for that seller, but it is not the end of the analysis; the shrewd seller will also ensure, *inter alia*, that super cap language is narrowly tailored so as to expose only intended incidents to elevated damages ceilings, and that insurance coverage is in place to backstop potential liabilities at each tier of contractual risk.

17. *Id.* at 114–15; Zoom Interview with Firm Attorney I (Oct. 16, 2023) (observing that impasse on liability limitation is usually resolved, not by one party agreeing to the other's position, but by "creating a new scheme entirely and carving out a particularly acute source of concern, source of risk, and giving it an entirely different treatment" such as a super cap).

18. Of note, third-party indemnification obligations are also carved out of many standard damage caps; however, scholars and practitioners have questioned whether such indemnification obligations constitute interparty liabilities that are, or should be, limited by damages caps, unless the indemnity obligation is breached. *See, e.g.*, Zoom Interview with Firm Attorney III (Nov. 29, 2023).

with obligations related to data security[19] might be excluded from the standard damages cap and instead subjected to a higher super cap of 4x fees paid and payable under the contract in the prior 12 months.[20] Super caps thus typically apply to high-risk items—primarily those related to data security—that buyers are unwilling to subject to standard damages caps, but for which sellers are unwilling to be entirely exposed.[21] To extend the laddering analogy, a standard damages cap would be a lower rung,[22] with super caps stacked above in ascending order and uncapped contingencies stretched above, wide and unconstrained.[23]

How and when does liability laddering arise in commercial contracting? Imagine impasse. In contracts as in life, the occasional standoff is inevitable. Parties state their positions and refuse to concede, obscuring mutual goals and grinding negotiations to a halt. Here, the specter of inefficiency looms large: a good deal not done brings unrecouped investment and unrealized profit potential, not to mention frustrated prospects for future collaboration. Here also, however, lies an opportunity for innovation. The familiar metaphor of bargaining as dance, while dramatic, nonetheless proves apt in application: simple movements such as push and pull, give and take, and studied pause give way in the face of deadlock and transactional complexity to technical, structural, and behavioral intricacies that can, when applied resourcefully, create value and improve outcomes.[24] Such transactional innovation is exemplified in commercial contracting by the incorporation of liability laddering.

The precision with which contract designers categorize liability for laddering purposes varies greatly from deal to deal. One contract might impose a super cap on any liabilities arising out of a vendor's breach of contractual provisions related to data security; another contract might impose a super cap on liabilities arising out of a data breach but

19. For purposes of brevity in its analysis of liability laddering, this Article will use the term "data security" in general reference to a party's protection of its own data and that of its customers, clients, and business partners.

20. For illustrative purposes only. *See* Benjamin Cukerbaum, III. LIMITATIONS OF LIABILITY, State Bar of Tex. 2023 Advanced Intell. Prop. L. 3-III (stating that "[t]he exact multiplier [of a damages cap] generally reflects the parties' respective leverage more than any principled calculation of likely damages, but some alternative ways to calculate a super cap exist. For example, customers could attempt to calculate the potential cost of a data breach using various tools" (citing IBM SEC., COST OF A DATA BREACH REPORT 2022 (July 2022), https://www.ibm.com/downloads/documents/us-en/10a99803ab2fd7ac [https://perma.cc/E9DM-MC63]); *see id.* ("Alternatively, a customer could say that the vendor's liability will be the amount of the vendor's cyber insurance policy, though this is problematic for multi-tenant SaaS vendors who will likely draw on (and drain) the policy to cover claims by multiple customers in the event of a data breach."); *see also* Zoom Interview with Firm Attorney II (Oct. 26, 2023) (observing the market for super caps in practice to generally fall between 3x and 10x, depending on deal size and leverage). For further discussion of super cap calculation methods, see *infra* note 98 and accompanying text.

21. This Article will often use the term "seller" to refer to the performing party under a commercial contract. In this way, as used here, "seller" is intended to encompass a seller, service provider, vendor, or any other party selling goods or services under a commercial contract.

22. Parties "could also set the second limit lower—a 'sub-cap'?—but it's rare." TOLLEN, *supra* note 9, at 200.

23. *See, e.g.*, Zoom Interview with Firm Attorney II (Oct. 26, 2023) (observing that the three-part structure of a standard damages cap, a super cap for enhanced damages, and unlimited liability is "the structure that [practitioners] use every day, and the industry uses").

24. *See* Ronald J. Gilson, *Value Creation by Business Lawyers: Legal Skills and Asset Pricing*, 94 YALE L.J. 239, 253 (1984) (describing the disconnect between capital asset pricing theory and real-world, imperfect markets, identifying "in the very failure of these [perfect market] assumptions to describe the real world . . . the potential for value creation by lawyers").

exclude (i.e., uncap) liabilities to the extent resulting from seller's breach of the information security provisions in the contract; and yet another contract might impose a super cap on enumerated liabilities such as cost of forensics, credit monitoring, and breach notification, with all other liabilities falling under the standard cap.[25] Despite these variables, super caps profoundly impact contractual liability allocation. Introducing liability ladders, however formulated, can thus make or break a commercial transaction. As one practitioner succinctly stated, transactional lawyers can "swoop in and offer a super cap to save deals."[26]

In this story, risk shifting constitutes our plot. And, as in storytelling, there is a twist: by exploring trends, applied theory, and bargaining efficiency in liability limitation, this Article will uncover an equally compelling story in the subplot, ultimately arguing that the most significant impacts of liability ladders lie not only in their primary function (i.e., imposing categorized liability limitation on one or both contracting parties), but also in their secondary, signaling functions. Drawing on original practitioner interviews, this Article suggests that liability laddering in commercial dealmaking signals distributed leverage, transactional commitment, and conscientious risk management—both internally, as between contracting parties, and externally, as between a party and its owners, investors, and potential acquirors—with important implications for efficiency, incentives, and value creation. How contract designers react to exogenous shock, as reflected in deal design and bargaining structure, sends critical messages to key constituents that influence a company's trajectory for years to come.

Much has been written on contractual liability limitation and enforcement, and recent years have seen an increased academic focus on complexities of design and substance in contracting. This Article contributes to the literature by (i) examining in depth, for the first time, the use of super caps in commercial contracts through a modern account of trends and risk allocation; (ii) in dialogue with a flourishing body of scholarship on contract design and contractual complexity, applying existing theories to super caps' purpose and function within commercial agreements; (iii) proposing that typical bargaining practices around liability limitations can introduce unintended inefficiencies that should be reexamined and reworked through creative hybrid dealmaking; and (iv) locating the most significant impacts of liability laddering not only in its primary, liability-limiting function, but also in its secondary, signaling functions. In arguing its prescriptive point, this Article will focus on two key aspects of modern commercial deals: bargaining chronology, which typically places super cap discussions toward the end of contract negotiations,[27] and layered information sharing, which occurs not only between contract parties but also between

25. Zoom Interview with In-House Attorney I (Nov. 17, 2023); Zoom Interview with Firm Attorney IV (Dec. 5, 2023).

26. Zoom Interview with Firm Attorney II (Oct. 26, 2023) (observing that a lawyer's introduction of a super cap in deal negotiations can build trust with their client by protecting the client from unlimited risk and helping to identify a heightened cap—often a fee multiple—that satisfies both contract parties).

27. Deal lawyers' reflections on bargaining sequence generally, and limitation of liability's terminal placement specifically, were largely consistent. *See, e.g.*, Zoom Interview with Firm Attorney I (Oct. 16, 2023); Zoom Interview with Firm Attorney II (Oct. 26, 2023); Zoom Interview with In-House Attorney I (Nov. 17, 2023). This Article will suggest that one reason super caps are often not resolved until the end of negotiations is that super cap provisions carry significant cognitive load and create profoundly integrated liability systems, thus complicating super caps' candidacy for efficient commoditization. *See* Zoom Interview with Firm Attorney I (Oct. 16, 2023), *infra* note 81 and accompanying text.

lawyers and their clients and among lawyers within a firm. This Article thus builds upon existing scholarship by reframing the role of liability laddering in commercial transactions through a signaling lens and applying market observations to challenge and expand existing understandings of dealmaking.

This Article proceeds as follows. Part I examines cutting-edge contract data to outline recent history and relevance of super caps in commercial transactions, situating these observations alongside original practitioner interviews and existing literature on risk allocation in modern contracting. Part II explores super caps through the lens of contract design and timely research on contract complexity. Part III considers the above-mentioned practitioner interviews together with existing scholarship in order to evaluate the chronology of contract negotiations and the layers and limitations of information sharing, encouraging a reordering of negotiation processes to incorporate liability laddering discussions earlier on the bargaining timeline. Finally, Part IV considers the primary and secondary functions of liability limitation. This Part argues that the secondary signaling functions of liability laddering—signaling leverage and transactional commitment between contracting parties, and signaling risk management sophistication to key third parties—are critical to businesses' stakeholder engagement, growth prospects, and overall success. This Article suggests that liability ladders are integrated contractual systems suggestive of larger contractual complexity and that, when utilized appropriately, liability laddering serves critical signaling functions, creates transactional efficiency, positively shapes parties' behavior, and offers unique opportunities for value creation by deal lawyers. To achieve appropriate utilization, however, contract designers must be open to reimagining key elements of the bargaining process, namely deal chronology and information sharing, to maximize efficiency and business outcomes.

I. RELEVANCE AND RISK ALLOCATION

It is a familiar refrain in commercial dealmaking that a prudent economic actor should not consummate a transaction if cost outweighs value.[28] In theory as in practice, the implications of this observation range wide: broad to narrow, existential to technical. The angle of the scale when balancing risk and reward can determine *whether* a deal gets done, and calculating probabilities against information-sharing costs can determine *how* a deal gets done.[29] Liability laddering emerges at this intersection. Limitation of liability serves as a mechanism for parties to fence in liability risk, tipping the balance toward value, and super caps go a step further by addressing high-risk contingencies with a specificity that requires concession and information-sharing by both parties. In this way, whether the deal gets done is directly impacted by how it is done, all as informed by relative risk, reward, *ex ante* contracting costs, and likelihood of *ex post* enforcement expense. This Part will explore the relevance of liability ladders in modern contracting, as illustrated by historic and current

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28. Scholars and practitioners generally agree on this point. *See, e.g.*, sources cited *supra* note 10 and accompanying text (discussing a seller's risk and liability considerations); Robert E. Scott & George G. Triantis, *Anticipating Litigation in Contract Design*, 115 YALE L.J. 814, 816 n.1 (2006) (arguing that "[p]arties trade efficiently when the value of the exchanged performance to the buyer exceeds the cost of performance to the seller; parties rely (or invest) efficiently when their reliance maximizes the contract's expected surplus net of reliance costs").

29. *See generally* Scott & Triantis, *supra* note 28.

usage, and as situated within broader discussions of risk allocation. Part I.A draws on original practitioner interviews and current data on commercial agreements to provide context and explore trends in commercial liability limitation with particular focus on the current prevalence of super caps as applied to data management provisions. Part I.B proceeds to situate super caps within broader discussions of risk allocation by briefly surveying existing literature on apportionment of risk in commercial transactions as applied to express contractual liability limitations and multi-tiered damages caps. Part I.C will summarize this Part and set the stage for Part II's inquiry into theoretical application.

A. Tradition and Trends in Commercial Liability Limitation

Super caps have been working their way into commercial deals for some time, in concept if not in name.[30] Indeed, the granular approach of marrying contingency categorization with customized outcomes is anything but new. M&A deal documents, for example, regularly incorporate staged survival periods for different categories of representations and warranties, as well as specialized risk allocation features such as specific "standalone" or "line-item" indemnities for particular issues of special concern to a buyer, whether resulting from findings in diligence or industry-specific regulatory risk.[31] Such line-item indemnities are expressly provided beyond the standard indemnities for seller's breach of representations, warranties, and covenants; line-item indemnities function similarly to super caps in that they are often excluded from the negotiated limitations, such as baskets and caps, that apply to standard indemnification obligations.

Nonetheless, the phrase "super cap" has become a buzzword of late, drawing increased attention that is likely due, at least in part, to super caps' routine utilization for purposes of data security risk allocation in software, technology, and other commercial agreements.[32] Noted trends include utilization of super caps in software and technology services contracts; to wit:

30. *See, e.g.*, Buckham & Richins, *supra* note 10, at 22–23 (presenting, in 2012, a hypothetical limitation of liability provision establishing a multi-tiered damages cap with a base-level damages limit of three times (3x) fees paid under the agreement and special caps of $10,000,000 for areas of heightened risk such as indemnity obligations; this bespoke treatment of high-risk occurrences for purposes of damages cap assignment offers an example of super cap usage—though not labeled as such—from over a decade ago).

31. *See, e.g.*, SRS ACQUIOM 2022 M&A DEAL TERMS STUDY (identifying taxes, capitalization, accuracy of closing certificates, and litigation among the line-item indemnities most frequently featured in private-target M&A acquisitions closing from 2016 to 2021); Tony Kuhel, *Indemnification in Private M&A Deals: Allocating Liability Risk Imperative*, CRAIN'S CLEVELAND BUS. (Jan. 16, 2018), https://www.crainscleveland.com/article/20180116/custom1718/148636/indemnification-private-ma-deals (on file with the *Journal of Corporation Law*) (discussing the use of line-item indemnities in certain circumstances); William M. Henry, *Mergers & Acquisitions: Crossing the Line—An Introduction to Line-Item Indemnities in M&A Transactions*, THOMPSON HINE BUS. L. UPDATE, Fall 2015, at 1–2 (discussing considerations from a buyer's and seller's perspective for including line-item indemnities in M&A agreements).

32. *See, e.g.*, Erika Vela & Craig C. Carpenter, *The Impact of Data Security Incident Trends on Commercial Transactions: Part III—Vendor Agreement Resolutions for 2022*, BAKERHOSTETLER: DATA COUNS. (Jan. 5, 2022), https://www.bakerdatacounsel.com/blogs/the-impact-of-data-security-incident-trends-on-commercial-transactions-part-iii-vendor-agreement-resolutions-for-2022/ [https://perma.cc/9TZP-LUSN] (observing increases in data security incidents involving vendors in 2020 and 2021, highlighting the costly implications of data breaches, and exploring resultant trends in indemnification and liability limitation in commercial agreements).

> In SaaS and IT services agreements, the general contractual liability cap is often some multiplier of the amounts paid under the agreement or the amounts paid in 12 months; however, in the context of ransomware or other significant personal information breaches, these caps can fall well short of costs and expenses. Sometimes, the parties account for this by incorporating a 'super cap' that applies to data privacy and security matters . . . however, this still requires thought and negotiation to determine an acceptable amount and coverage.[33]

Using original practitioner interviews and referencing sampled contract data, this Part will explore observed and applied use of tiered liability systems in recent years, setting the stage for this Article's subsequent analysis of these systems within larger discussions of risk allocation, contract design, signaling, bargaining chronology, and information sharing.[34]

1. Practitioner Interviews and Contract Data

While the concept of tying heightened risk to heightened damages caps has been used in practice for some time, deal lawyers have observed expansion of usage and familiarity with super caps in recent years.[35] One practitioner recalled, for example, having to educate clients about what super caps were and how to utilize them prior to the latter 2010s, but noted that now, business parties are much more familiar with the multi-tiered approach to damages caps.[36] Of course, and as is the case with any negotiated risk allocation, meaningful bargaining concerning super caps—and limitations of liability more generally—only occurs when there is some level of leverage on both sides of a transaction; if one party holds all of the leverage, it will present contract provisions favorable to its interests, and negotiations will be over before they begin.[37] This one-sided approach to commercial

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33. *Id.* Relevant factors in considering appropriate formulation of a super cap may include industry research on cost of data breach and the volume, scope, nature, and duration of vendor data access. *See, e.g.*, Zoom Interview with In-House Attorney I (Nov. 17, 2023) (discussing particular categories of data, such as personal identifiable information ("PII") and protected health information ("PHI") as among the most sensitive types of data, access to which would justify a higher super cap); Zoom Interview with Firm Attorney IV (Dec. 5, 2023) (discussing probable expense analysis, considering factors such as forensics, breach notifications, and credit monitoring).

34. The methodology used for the practitioner interviews referenced herein is described in more detail in Appendix A.

35. *See, e.g.*, Zoom Interview with Firm Attorney II (Oct. 26, 2023) (observing that, before 2017, the super cap was used conceptually but was not the go-to strategy for resolving liability limitation impasse, and that now, when negotiating limitations on liability in commercial deals, "super caps are an industry trend. That's how you do it. That's how these things are negotiated"); Zoom Interview with Firm Attorney I (Oct. 16, 2023) (referring to present-day super cap treatment for data protection issues as a "market standard resolution" of an issue that may not have existed a decade ago); Zoom Interview with Firm Attorney VII (Dec. 21, 2023) (identifying increased liability from data use and data privacy matters as the likely "catalyst" for increased super cap usage); Zoom Interview with In-House Attorney V (Jan. 12, 2024) (approximating that one in five enterprise negotiations included a super cap in early years of practice, beginning in 2016, and observing that now, almost every enterprise deal includes a super cap).

36. Zoom Interview with Firm Attorney II (Oct. 26, 2023) (recalling that, prior to 2017, "the negotiation was typically what is under the standard cap of damages, and what's unlimited . . . now, you just settle . . . what goes under the standard cap, what goes under the super cap, and what's unlimited").

37. *See id.* (observing that, due to limited resources, the party without leverage will often "simply take it on the chin, and it's a business decision . . . . What you'll otherwise get [without distributed leverage] is a low cap on the party with leverage and unlimited liability for the party without").

dealmaking was a focus of the 2023 National Cybersecurity Strategy put forth by the Biden White House; from a public policy perspective, if software vendors with outsized leverage impose overreaching limitations—or even elimination—of their liability for data breach incidents, those vendors will not be incentivized to comply with industry best practices.[38] The observations and prescriptive arguments set forth in Parts II.D and III.C will consider these public policy concerns in more detail.

While the exact date of a market shift is difficult to pinpoint, deal lawyers generally locate the emergence of super caps as industry standard within the five-year period between 2015 and 2020.[39] Practitioners believe the likely source of this growing trend is related to the frequency and rising cost of data breach incidents—and regulatory responses to the threat.[40] Indeed, recent reports indicate that in 2023 an average data breach cost $4.45 million, representing a three-year increase of 15%,[41] and in 2022 and 2023, more than 10% of Russell 3000 firms in the United States were impacted by cyber incidents.[42]

38. THE WHITE HOUSE, NATIONAL SECURITY STRATEGY 19–22 (2023), https://bidenwhitehouse.archives.gov/wp-content/uploads/2023/03/National-Cybersecurity-Strategy-2023.pdf [https://perma.cc/V699-PZYC] (establishing the Biden Administration's "Cybersecurity Strategy").

39. *See, e.g.*, Zoom Interview with Firm Attorney I (Oct. 16, 2023) (recalling super caps as becoming the prevailing market standard within the last five years); Zoom Interview with Firm Attorney II (Oct. 26, 2023) (recalling usage of super caps between 2017 and 2020, and establishment of the trend in the years since 2020); Zoom Interview with Firm Attorney IV (Dec. 5, 2023) (observing establishment of super caps as a market trend in the last two or three years); Zoom Interview with Firm Attorney V (Dec. 12, 2023) (approximating the rise of super caps as having grown significantly in the last five years); Zoom Interview with In-House Attorney I (Nov. 17, 2023) (observing that, in the wake of large data breaches, super caps started to emerge as one-off solutions, but that super caps are only "just now crossing that threshold" and becoming routine).

40. Chief among these regulatory responses is Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (General Data Protection Regulation ("GDPR")), 2016 O.J. (L 119) 1. *See, e.g.*, Zoom Interview with In-House Attorney II (Dec. 22, 2023) (observing that "super caps in my opinion, in what I saw, came about because of GDPR" and the sizeable fines thereunder); Zoom Interview with Firm Attorney III (Nov. 29, 2023) (recalling the super cap trend as rising, relatively recently, with respect to cloud computing and vendors managing customers' data); Zoom Interview with In-House Attorney V (Jan. 12, 2024) (identifying the enactment of GDPR as the catalyst for the increased use of super caps). For purposes of timeline orientation, it is of particular note that the GDPR went into effect in May 2018. At this "watershed moment," the European Union ("EU") imposed comprehensive data protection requirements impacting any business doing business in the EU, and other jurisdictions followed suit. Red Hat Data Security + Privacy Team, *The Impact of the GDPR—Privacy Matters*, RED HAT BLOG (Mar. 29, 2019), https://www.redhat.com/en/blog/impact-gdpr-privacy-matters [https://perma.cc/YN3H-49UA]; Claudia Fendian, *Now What? A New Direction for U.S. Businesses and Law in the Wake of the General Data Protection Regulation*, 29 S. CAL. INTERDISC. L.J. 129, 129–30 (2019) (noting the GDPR's vast expansion of consumer rights and business requirements, international implications of GDPR, and increased attention (and anxiety) around data protection standards); Paul Breitbarth, *The Impact of GDPR One Year On*, 2019 NETWORK SEC. 11, 11 (observing that "[t]he GDPR has created a surge in privacy regulations" and that businesses' "[c]ompliance with GDPR demands ongoing attention").

41. Craig C. Carpenter, Janine Anthony Bowen & Erika Vela, *DSIR Deeper Dive: Data Processing Addendums: Indemnities, Limitations of Liability and the Cost of a Data Breach*, BAKERHOSTETLER: DATA COUNS. (Nov. 27, 2023), https://www.bakerdatacounsel.com/blogs/dsir-deeper-dive-data-processing-addendums-indemnities-limitations-of-liability-and-the-cost-of-a-data-breach/ [https://perma.cc/FLG5-CENA]; Vela & Carpenter, *supra* note 32.

42. Subodh Mishra, *Managing Cyber Risk: Breach Risk Trends in Public Companies*, HARV. L. SCH. F. ON CORP. GOVERNANCE (Aug. 22, 2024), https://corpgov.law.harvard.edu/2024/08/22/managing-cyber-risk-breach-risk-trends-in-public-companies/ [https://perma.cc/5P46-R74R].

Practitioners describe super caps as often the only path to resolution of data-related liability negotiations. Until recently, it was standard practice to tie damages caps to the value of the contract, with certain high-risk items often excluded.[43] However, as highly publicized mega-breaches and astronomical ransom payments slotted into the modern commercial zeitgeist, the cost of breach—at least as related to data security—began to disconnect from the value of underlying services.[44] In this environment, where a SaaS contract with annual fees in the five-figure range can expose a customer to millions of dollars in damages, an all-encompassing damages cap tied to contract value no longer makes sense.[45] Buyers refuse to include data security damages under standard damages caps, and vendors refuse to be uncapped. Liability ladders and super caps, in turn, become more prevalent.[46] Interestingly, despite being increasingly familiar to practitioners and business parties alike, super caps are often not addressed (or, in many cases, even acknowledged as an option) at the outset of negotiations.[47] This Article will explore, in Part III, practitioners' observations about super caps' placement along typical bargaining chronologies.

These original practitioner interviews prove particularly useful in this context, in part because they provide unique insight into the nuance of commercial practice on the ground, and in part because robust empirical analysis of liability laddering in commercial contracts, and of commercial contracts generally, is otherwise constrained by the very nature of commercial dealmaking. Publicly available transactional data on negotiated domestic deals is largely derived from agreements filed with the United States Securities and Exchange Commission (the "SEC"); as such, any such sample is limited at the outset to contracts involving publicly traded companies. Furthermore, many commercial agreements are entered into in the ordinary course of business, and as such, even for public companies, these contracts may not be subject to the SEC's reporting requirements. As an alternative approach, in pursuit of more vigorous contract analytics, innovative software companies such as TermScout are using a combination of artificial intelligence and human contract professionals to analyze data pulled from verified public contracts and aggregated, anonymized statistics.[48] While both approaches have their limitations, this Article references data from

43. *See, e.g.*, sources cited *supra* note 28 and accompanying text (discussing the balance of cost and value in contracting); Zoom Interview with Firm Attorney IV (Dec. 5, 2023) (referring to this structure as the "bedrock" of liability limitation in commercial contracting prior to the "shift in the winds" of the past several years).

44. Zoom Interview with In-House Attorney I (Nov. 17, 2023); Zoom Interview with Firm Attorney IV (Dec. 5, 2023).

45. *See, e.g.*, sources cited *supra* note 41 and accompanying text.

46. Some practitioners also described an even newer, developing phenomenon of super cap spillage, i.e., now that super caps have become market standard for data security liabilities, certain sellers with leverage have started to ask for super caps on other high-risk items that would previously have been uncapped. *See, e.g.*, Zoom Interview with Firm Attorney I (Oct. 16, 2023); Zoom Interview with Firm Attorney IV (Dec. 5, 2023). *But see, e.g.*, Zoom Interview with Firm Attorney VII (Dec. 21, 2023) (observing limited use of super caps outside the data space unless there is a specific risk at play, such as class action or regulatory investigation risk, and reflecting that super caps typically center around a "particular risk in the landscape"); Zoom Interview with In-House Attorney III (Jan. 2, 2024) (referring to application of super caps beyond data security, confidentiality and intellectual property infringement indemnification as "anomalous"); Zoom Interview with In-House Attorney V (Jan. 12, 2024) (observing spillage as limited to specific regulated customers that have a "pet peeve" for which they require specialized liability treatment, "to scratch a certain itch or concern").

47. *See, e.g.*, Zoom Interview with Firm Attorney I (Oct. 16, 2023).

48. *See, e.g.*, *Contract Review and Certification Methodology*, TERMSCOUT, https://learn.termscout.com/knowledge/contract-review-and-certification-methodology [https://perma.cc/F6J3-9BFA]; *Where*

TermScout due to its relatively robust sample of information technology agreements, emphasis on objectivity and data integrity, and functionality allowing for identification of super cap usage across agreement types.[49]

At the time of writing, TermScout data indicated that, of the information technology agreements in its Database, 12% of vendor forms, 10% of customer forms, and 31% of negotiated contracts included a super cap (referred to by TermScout as a "secondary cap"); of the services agreements in its Database, 7% of vendor forms, 5% of customer forms, and 13% of negotiated contracts included a super cap.[50] Interestingly, these findings indicate that super caps are presently *off*-market, in contrast to practitioner reflections, though both practitioners and TermScout data indicate liability laddering is most prevalent in technology contracts.[51] This on-versus-off market disconnect may be due, at least in part, to the sampling limitations referenced above; furthermore, practitioners' observations may include bargains in which super caps were discussed but did not end up in the final contract, a metric which would not be captured in qualitative analysis of negotiated agreements. Despite these variations, liability laddering's presence in almost one-third of negotiated information technology agreements in the TermScout sample is significant, and, in combination with practitioner observations, highlights a developing contract trend of recent inception.

2. Practice Literature Overview

Practitioner reflections and preliminary data on super cap usage, as summarized above, find further support in timely practice literature.[52] By way of example, a recent presentation on cloud contract negotiation by a major international law firm mentions the super cap as a "common landing spot" in liability limitation bargaining between a customer wishing to maximize available damages and a vendor wishing to fence in liability risk, observing that "[s]uper caps for certain breaches such as data security are now market" and

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Does TermScout Get Its Contract Data From?, TERMSCOUT, https://learn.termscout.com/knowledge/where-does-termscout-get-its-contract-data-from [https://perma.cc/2ZB5-DLKE].

49. *See* sources cited *supra* note 48. The Author finds it imperative to emphasize the preliminary nature of these observations. The collection of agreements sampled as of January 19, 2024, was modest in size and scope: of 2,795 IT agreements in TermScout's Contract Market Database™ (the "Database"), 2,240 vendor forms, 203 customer forms, and 352 negotiated contracts had been analyzed, and of 544 service agreements in the Database as of the same date, 369 vendor forms, 143 customer forms, and 32 negotiated agreements had been analyzed. A more encompassing review of available agreements (including, e.g., drilling down to isolate analysis for specific industry sectors) may reveal meaningful nuance, and intensive analysis of provisional interdependencies within each agreement in a sample could shed further light on the complexities of super cap usage. Furthermore, and of particular relevance to this Article, TermScout data is regularly updated and, as of the time of writing, not sortable by date. Further longitudinal analysis would be needed to isolate emergence of the trend and analyze year-over-year usage of multi-tiered liability limitations across contracts.

50. Downloaded reports on file with Author.

51. *Id.*; *see also* Vela & Carpenter, *supra* note 32 (discussing the practitioner's perspective).

52. This Article uses the term "practice literature" in general reference to materials such as memoranda and legal alerts published by law firms, bar associations, and publishing services focused on timely legal issues and analysis as applied to legal practice and profession. Practice literature "is often overlooked as a research source but is in fact a rich source of information." Hwang, *supra* note 6, at 422.

formulation of such super caps varies "drastically" across agreements.[53] Another recent publication describes the super cap trend by noting that "if the potential damages are large, the parties often agree to a 'supercap' or higher cap on damages for such breach, which offers a middle-ground approach for the parties somewhere in between no damages and unlimited damages for such breach."[54] In sum, as data security incidents continue and costs of litigation and risk management increase,[55] relevant practice literature observes that:

> [V]endors . . . have become increasingly reluctant to provide unlimited liability to protect Clients against harms caused by security incidents, going to great lengths to narrowly tailor the situations under which the vendors will bear risk. On the other hand, Clients have been increasingly reluctant to have a data security incident classified as a regular contract breach and be subject to regular contract damages. The resulting compromise, in many instances, is the "super cap."[56]

Bespoke contingency-damages alignment, while conceptually established in transactional practice, finds fresh context and renewed attention in the form of super caps. Recent years have seen acute acceleration in technological and information-sharing advancement, with businesses and regulators scrambling to keep pace. In the face of ceaseless change, evolving regulation, and staggering access to information, it is difficult to isolate risk from awareness: are there more risks now, or are we just more aware of them? Whatever the answer, in the face of uncertainty, commercial parties have turned to bargaining.[57] Known risk, such as data security, evolving alongside technological innovation and thrown onto

53. SONIA BALDIA, EDWIN SZETO & JEFFREY CONNELL, IN-HOUSE COUNSEL'S PLAYBOOK FOR NEGOTIATING CLOUD CONTRACTS FOR SAAS, IAAS, AND PAAS 57 (2021), https://www.acc.com/sites/default/files/2021-09/9.28.21%20Cloud%20Contracts.pdf [https://perma.cc/GK5S-AMGP].

54. Emily Lowe & Katrina Slack, *Important Considerations for Limitation of Liability Carveouts*, JD SUPRA (Apr. 15, 2022), https://www.jdsupra.com/legalnews/important-considerations-for-limitation-9302791/ [https://perma.cc/HSZ7-YNVK].

55. *See, e.g.*, BAKERHOSTETLER, 2023 DATA SECURITY INCIDENT RESPONSE REPORT 2 (2023), https://admin.bakerlaw.com/wp-content/uploads/2024/05/2023-DSIR-Report-Web.pdf [https://perma.cc/47XV-FMTA] (showing the increase in incidents and associated cost, specifically noting a 20% increase in forensic investigation costs alone, excluding additional costs associated with prevention efforts).

56. Craig C. Carpenter, *The Impact of Data Security Incident Trends on Commercial Transactions: Part II—Development Agreements*, BAKERHOSTETLER: DATA COUNS. (Oct. 12, 2021), https://www.bakerdatacounsel.com/blogs/the-impact-of-data-security-incident-trends-on-commercial-transactions-part-ii-development-agreements/ [https://perma.cc/9UCB-Q4ZN].

57. *See, e.g.*, Matthew Jennejohn, *The Architecture of Contract Innovation*, 59 B.C. L. REV. 71, 89 (2018); *see generally* Stephen J. Choi, Mitu Gulati & Eric A. Posner, *The Dynamics of Contract Evolution*, 88 N.Y.U. L. REV. 1 (2013) (discussing common methods of developing contract language in practice—and observing the impact of exogenous influences on contract evolution). Preliminary data on super cap usage appears to track these observations. This line of reasoning suggests that commercial dealmakers, settled into a quasi-standardized pattern of liability limitations and carveouts, reacted to the exogenous shock of data breach proliferation by evolving and adjusting—i.e., by incorporating multi-tiered liability limitations with increased regularity. While perhaps not yet boilerplate per se, super caps, in their capacity as a "common landing spot" for limitation of liability bargaining, have become increasingly prevalent. BALDIA, SZETO & CONNELL, *supra* note 53, at 57. Super caps may be well on their way to settling into the standardized playbook for contract designers. *See, e.g.*, Zoom Interview with In-House Attorney I (Nov. 17, 2023) (observing that super caps have only recently transitioned from being a new trend—something parties are testing out—to being established in sophisticated business parties' negotiation playbooks as standard fallback positions). For a discussion of the continued evolution of liability laddering treatment in commercial deals, see sources cited *infra* note 98 and accompanying text.

the world stage by bad actors and regulators, is addressed with tailored specificity through contractual mechanisms such as super caps. In this way, dealmakers find some sense of familiarity in their bargain and some sense of comfort in their expectation of enforceability.[58]

B. Risk Allocation in Modern Contracting

Risk allocation is ubiquitous in bargaining, imprinting on each aspect of contracting's core work. From translation to planning, information sharing to business goal advancement, each facet of negotiation is overlaid with fundamental considerations of risk. Which party is in a better position to control outcomes? Which party has better access to accurate and complete information? Which party should reasonably assume a given risk as the cost of doing business in a particular market space? Each party's position on these questions informs its bargaining approach on matters as wide-ranging as payment terms, performance specifications, representations, warranties, covenants, and force majeure. Limitation of liability provisions are among the most obvious examples of risk allocation in action. Here, a seller would spread wide its safety net, imposing limitations on its potential liability as broad as applicable law, public policy, and the buyer will allow. The buyer, in turn, would seek to roll back the net, clearing its path to available remedies wherever possible, particularly in areas of notable concern or heightened risk. Back and forth. Where holes emerge, the parties must mind the gap.

In considering various deal types for purposes of modern risk allocation analysis, M&A and commercial transactions are illustrative. Despite the differences between M&A and commercial deals, several parallels exist. Each deal type involves a sale of some kind, whether of business assets, equity, goods, or services, and purchase agreements across deal types share meaningful structural similarities. A Master Services Agreement and an Asset Purchase Agreement, for example, will each typically include provisions on pricing and payment, representations and warranties, confidentiality, indemnification, limitation of liability, and covenants, in addition to miscellaneous provisions addressing matters such as, *inter alia*, notices, interpretation, severability, integration, amendment and modification, dispute resolution, and signature process.[59] Furthermore, the primary documents effecting each deal type feature risk allocation mechanisms that, while tailored to the particular transaction at hand, exhibit many of the same general characteristics.[60] An examination of

58. *See, e.g.*, sources cited *supra* note 6 and accompanying text regarding enforceability of contractual limitations of liability generally. *See also* Alan Schwartz & Robert E. Scott, *Contract Theory and the Limits of Contract Law*, 113 YALE L.J. 541, 556–59 (2003) (discussing self-enforcement, reputational enforcement, and state enforcement of contracts).

59. *See generally* GEORGE W. KUNEY, THE ELEMENTS OF CONTRACT DRAFTING (5th ed. 2020); Erik Lopez, *Anatomy of an Asset Purchase Agreement*, THE M&A LAW. BLOG, https://themalawyer.com/anatomy-of-an-asset-purchase-agreement/ [https://perma.cc/7L86-F385]; Erik Lopez, *Anatomy of a Stock Purchase Agreement*, THE M&A LAW. BLOG, https://themalawyer.com/anatomy-of-a-stock-purchase-agreement/ [https://perma.cc/2Y43-FPCY]; DOUG GRISWOLD, LAURA MCKINNEY & JED ROEBUCK, ANATOMY OF A PURCHASE AGREEMENT: PERSPECTIVES FROM BUYER'S AND SELLER'S COUNSEL 4, 10–15, 19–21 (2020), https://www.acc.com/sites/default/files/2020-01/ACC%20Presentation%20-%20Anatomy%20of%20MA%20Purchase%20Agreement%204845-2482-4496%20v3.pdf [https://perma.cc/6VAD-CJQQ].

60. *See, e.g.*, Kuhel, *supra* note 31; *see generally* Henry, *supra* note 31 and accompanying text (discussing line-item indemnities).

certain shared features among these common business transactions should thus prove illuminating in considering the high-level function of risk allocation in modern contracting.

As a preliminary matter of structure, it is the rare deal that is consummated in a single negotiated document. Staged contracting, where price and other high-level business terms are established via a non-binding preliminary agreement between parties, and nonprice terms are then agreed by the parties' lawyers in subsequent stages, is more typical of the modern business deal.[61] While useful for various substantive and formal functions, including for purposes of building "deal momentum" over the lifecycle of a complex transaction,[62] staged contracting can create a sense of zero-sum negotiation for attorneys: contract provisions can be expanded or narrowed, absolute or qualified, but, absent material divergence from party expectations, practitioners are not able to trade risk allocation against an adjustment to price, thus limiting bargaining to the distributive flavor and impeding attempts at cooperative bargaining among parties.[63]

But price is not the only component of value. Indeed, as dealmakers quickly learn and scholars observe, "the act of reducing uncertainty—reducing risk . . .—is value creating however it is accomplished."[64] In private contracting, which has seen an upward trend in structural and substantive complexity in recent years,[65] lawyers are thus presented with abundant and integrated opportunities to allocate risk at various junctures of an increasingly intricate system. Substantive novelties, such as reverse termination fees and top-up options in M&A[66] or source code escrows and deescalating termination fees in commercial deals, coalesce with substantive expansions such as additional representations and warranties across deal types, and the iterative dance of risk allocation continues.[67]

It remains an open question whether a higher number of risk-shifting provisions results in greater overall deal value.[68] Indeed, the analysis—like its subject—is complex. In the process of shifting risk and cost during the drafting process, scholars have theorized

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61. *See, e.g.*, GRISWOLD, MCKINNEY & ROEBUCK, *supra* note 59, at 2 (discussing a typical modern deal and breaking it down into various stages).

62. Hwang, *supra* note 6, at 376.

63. Albert Choi & George Triantis, *The Effect of Bargaining Power on Contract Design*, 98 VA. L. REV. 1665, 1694–96 (2012).

64. Gilson, *supra* note 24, at 312.

65. *See generally* Cathy Hwang & Matthew Jennejohn, *The New Research on Contractual Complexity*, 14 CAP. MKTS. L.J. 381 (2019) (discussing the rise in contract complexity in recent years).

66. *Id.* at 383 n.9 (citing John C. Coates IV, *Why Have M&A Contracts Grown?* 14 (Eur. Corp. Governance Inst., L. Working Paper No. 333/2016 (2016)); *see also* Afra Afsharipour, *Transforming the Allocation of Deal Risk Through Reverse Termination Fees*, 63 VAND. L. REV. 1161, 1219–20 (2010) (discussing the significance and complexity of reverse termination fees).

67. A source code escrow, by its very existence, shifts risk to a software developer (and protects the client) by preserving source code for mission-critical software; the source code would be released to the client upon the occurrence of triggering events that would otherwise jeopardize the beneficiary-client's access to the software (e.g., the developer's going out of business or material breach of the underlying license). Deescalating termination fees shift risk to the would-be terminating buyer by imposing a cost on early termination of a commercial arrangement, thus protecting the seller by allowing for recoupment of anticipated up-front investment. And each representation and warranty presents an opportunity for shifting of risk vis-à-vis its absolute or qualified nature. Once qualified (e.g., by inclusion of materiality or knowledge qualifiers, addition of exceptions or clarifications—through disclosure schedules or otherwise—or imposition of temporal scope through explicit date range references or "look-backs"), the extent of risk shifting is further adjusted based on qualification, scope, and exception.

68. *See generally* Hwang & Jennejohn, *supra* note 65 (surveying contractual complexity literature and noting the need for future research into how complex agreements are enforced).

that parties will bear front-end transaction costs to negotiate bright line rules in situations of relative certainty (i.e., where the information relative to performance and breach is verifiable by a third party, such as a court), while parties will push transaction costs to the back end vis-à-vis vague standards in situations of higher uncertainty.[69] Furthermore, recent scholarship makes a compelling case that complex contracts are "integrated systems" that blur the risk-shifting lines between rules and standards, observing that, while rules and standards do exist, distinctions between them are not as clean-cut as might be suggested by conventional economics.[70] The implications of this are significant, as the risk-shifting interplay between rules and standards, and the blending of them, affects how courts interpret contracts, which in turn informs how contracts are designed.[71] As will be explored in more detail in Part II.C, super caps provide a current example of this rules-standards blending phenomenon in the context of modern risk allocation.

Nuance notwithstanding, of the various prospects for risk allocation in modern contracting, a limitation of liability provision, which—in some form—is common to M&A and commercial deals alike, is arguably among the most impactful. This is due to the unambiguous fencing-in of liability risk and the fundamentally relational nature of liability provisions, which interact inextricably with various other provisions of an agreement. By specifically excluding liability for certain types of damages (such as punitive and consequential damages) and placing maximum limits on monetary damages, limitation of liability provisions set ripple effects in motion within a contract, making plain and pervasive the shifting of risk in favor of the protected party. And where nuance is introduced, namely through qualifications, exclusions, and multi-tiered damages caps, liability limitation finds steady footing as a specimen of contractual complexity.[72] Part II will build on this observation by situating super caps in relation to modern contract theory, including theories of contract design and complexity.

Like other varieties of risk shifting, limitation of liability has motivational implications. It is well established, both in practice and in scholarship, that "[t]he ability to sue and recover damages for breach of contract *ex post* is understood as a way to motivate party behavior *ex ante*."[73] Placing limitations on available damages should then, in turn, further influence party motivations. A buyer may worry that liability limitations would neutralize a seller's motivation to comply with contractual rules, whereas a seller may find it reasonable, through limitations on liability, to shift some risk back to the buyer and thereby motivate the buyer to take its own risk mitigation precautions. Furthermore, a risk-averse seller may not find motivation to do the deal in the first place without this form of risk shifting, which the seller can use to ensure that the risk does not unreasonably outweigh the reward.

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69. Jennejohn, *supra* note 57, at 133–37. For further discussion, see *infra* Part II.C.

70. *Id.* at 133–34.

71. *See id.* at 135–137.

72. *See, e.g.*, sources cited *supra* note 31 and accompanying text. It is worth noting that limitations of liability generally, and super caps specifically, need not be overly structurally complex in order to implicate contractual complexity; indeed, the integrated nature of limitation of liability provisions, the contingent-state analysis required to craft them thoughtfully, and the multi-layered information sharing among parties and their counsel combine to create a meaningfully complex bargaining environment suggestive of significant cognitive load, one measure of contractual complexity in modern scholarship. *See, e.g.*, sources cited *infra* notes 76–79, 107 and accompanying text.

73. *See* Hwang, *supra* note 6, at 378.

Liability laddering, from its fundamentally balance-driven position, offers a unique path toward equilibrium.

C. Summary

Business parties and their counsel have long wrestled with allocation of risk in transaction agreements. Business deals of all kinds regularly feature various risk-shifting mechanisms, from payment terms to closing conditions, from inclusion of "flat" (or unqualified) representations and warranties to qualification of the same, and from indemnification to baskets and caps. But with changing times come changing risks, and deal documents evolve in response. Scholars' recent observations of increased contractual complexity[74] are supported by the practitioner interviews, preliminary data, and practice literature discussed in this Part. As transaction agreements in general have grown increasingly complex, so too have specific risk-shifting provisions such as limitation of liability clauses. Mapping observed trends across a recent timeline suggests a relationship between emerging business risk and contract outcomes. In a world of dynamic data security concerns and shifting regulatory landscapes, liability ladders are primed to flourish.

II. THEORETICAL APPLICATION

As we are assuming, for purposes of this Article, that the limitations on liability in question (including, in turn, liability ladders and their constituent parts, such as super caps) would be enforceable under the laws of applicable jurisdictions, our analytical approach thus takes a fundamentally design-oriented perspective, i.e., considering super caps through a lens of *ex ante* motivations and incentives, as opposed to *ex post* enforcement.[75] This Part applies existing theories of contract design and complexity to liability ladders. Part II.A argues that multi-tiered liability limitations are fundamentally integrated provisions that are suggestive of greater contractual complexity but that nonetheless promote efficiency; Part II.B explores hybrid contracting in commercial dealmaking; Part II.C examines rules-standards analysis in the context of liability laddering; and Part II.D proposes that super caps offer a compelling mechanism for incentive shaping, value creation, and conflict resolution in sophisticated negotiations.

A. Complexity, Design, and Limitations of Liability

Part I of this Article previewed a characterization of the super cap as suggestive of contractual complexity vis-à-vis allocation of risk. This Part will investigate that claim. At the outset, an applied discussion of contractual complexity requires an exercise in definition and context. In most cases, the mere existence or substance of a particular contract provision will be insufficient justification for wholesale categorization of the subject agreement as complex.[76] Contractual complexity has been measured in various ways, including

74. *See generally* Hwang & Jennejohn, *supra* note 65.

75. Hwang, *supra* note 6, at 379 n.6 (noting that "[o]ther scholars have approached contract questions from the perspective of *ex ante* design, rather than *ex post* enforcement, with interesting results").

76. Scholars have referred to complex structuring within the boundaries of an individual agreement as "infra-transactional complexity." *See* Jennejohn, *supra* note 57, at 73. In light of this Article's infra-transactional

by document length, provision count, digital size, and "the multidimensional 'cognitive load' metric, which captures complexity indirectly by measuring the extent to which an agreement taxes the faculties of the humans designing the contract."[77] Recent scholarship has gone further still, reframing the study of contracts using a systems-based approach,[78] including by the utilization of network analysis as a compelling framework for studying interdependency in complex agreements.[79]

Put plainly, then, complexity is complex, and this Article does not tempt reductionism by arguing that a super cap is a failsafe proxy for a complex agreement.[80] Instead, the more subtle suggestion put forth here is that limitations of liability generally, and liability ladders specifically, are themselves integrated mini-systems indicative of larger contractual complexity. The justification for this is threefold. First, liability laddering appears to carry a heavy cognitive load, as suggested by many practitioner interviews and the typical bargaining chronologies explored further in Part III. While the structure of a super cap, in and of itself, may not be overly complicated, the cognitive weight of ever-shifting risk landscapes and the integrated nature of liability ladders, discussed later in this Article, can quickly pile on increased complexity. The role of unpredictability and newness in cognitive load analyses support contract designers' tendency to resolve limitation of liability and super cap discussions toward the end of the bargaining process. Indeed, as one practitioner stated, limitations of liability often "get deferred because they're harder to deal with."[81] Second, incorporating super caps within a limitation of liability provision adds length and may also, depending on use of tabulation and other design choices, add provision count to a commercial agreement. Third, the very nature and structure of liability ladders, i.e., establishment of heightened damages limitations for enumerated high-risk, high-liability occurrences, engenders a provision that is fundamentally interconnected with other contractual provisions (e.g., data security obligations) and concepts.

If liability ladders suggest infra-transactional complexity, then complex contract design theory should inform descriptive and prescriptive analyses of modern risk allocation vis-à-vis liability laddering. This Part will proceed to explore these concepts as follows: Part II.B will discuss hybrid contracts featuring both standardized and bespoke components as a trend in modern dealmaking generally and as an opportunity for efficiency in liability

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focus, the terms "complexity" and "infra-transactional complexity" (and variations thereof) will be used interchangeably herein for convenience.

77. *Id.* at 104 (citing Karen Eggleston, Eric A. Posner & Richard Zeckhauser, *The Design and Interpretation of Contracts: Why Complexity Matters*, 95 NW. UNIV. L. REV. 91, 99 (2000); John Hagedoorn & Geerte Hesen, *Contractual Complexity and the Cognitive Load of R&D Alliance Contracts*, 6 J. EMPIRICAL LEGAL STUD. 818, 825–28 (2009)); *see also* Scott & Triantis, *supra* note 28, at 821 (defining contractual complexity or "completeness" as "the degree to which a contract separately addresses different contingencies that call for different obligations.").

78. *See generally* Spencer Williams, *Contracts as Systems*, 45 DEL. J. CORP. L. 219 (2021) (applying "complex systems theory" to the interpretation of contracts).

79. Jennejohn, *supra* note 57, at 104. Jennejohn observes that network analysis "provides concepts and methods capable of studying the interconnections between the governance mechanisms in complex agreements." *Id.*

80. Indeed, a super cap itself is relatively simple. *See, e.g.*, Zoom Interview with Firm Attorney III (Nov. 29, 2023) (referring to a super cap as, ultimately, a bargaining chip, and arguing that a super cap's simplicity puts a red flag on it: if the super cap is too low, that is a red flag for buyer, and if it is too high, that is a red flag for seller).

81. Zoom Interview with Firm Attorney I (Oct. 16, 2023).

limitation, and Part II.C will consider usage of rules and standards in commercial contracting. In conclusion, Part II.D will argue that deal lawyers can maximize drafting efficiency by exploiting sophisticated hybrid agreements and running negotiation of integrated provisions, such as those related to data protection and limitation of liability, on similarly integrated tracks.[82]

B. Hybrid Contracts

Infra-transactional complexity raises a dilemma for practitioners and prescriptive scholars alike: increasingly complex transactional systems allow for bespoke customization and give bargaining parties an array of tools with which to build and bolster protections and anticipate various outcomes; conversely, drafting and negotiating complex agreements is costly, and swelling transaction costs are exacerbated in the context of the interrelated provisions that are endemic within complex contracts.[83] Many have argued that standardization presents a compelling antidote to the unsustainable cost and cognitive load of complex contracting, but research reveals little evidence of consistent standardization in the market; instead, "attorneys design hybrid agreements by starting with standardized templates and then materially altering the language to fit the specific circumstances of a deal, mixing bespoke and boilerplate terms."[84] Recent scholarship has found herein a promising observation: these hybrid contracts offer a "mass customized" middle ground whereby transactional attorneys can attempt to simultaneously achieve economies of scale and scope, often thought to be mutually exclusive.[85]

Deal lawyers suggest that hybrid contracts are ubiquitous in modern commercial dealmaking.[86] Templates, though, have lagged behind in adjusting to reflect shifting bargaining trends.[87] Most templates include limitations of liability, and some sophisticated

82. Integrated negotiation of integrated provisions will hereinafter be referred to as negotiation on "braided tracks."

83. Jennejohn, *supra* note 57, at 74 (noting that "[t]he costs of complexity also extend to back end enforcement, where courts are often called upon to interpret a provision embedded within a complicated latticework of obligations.") (citing Verified Consolidated Shareholder Class Action Complaint ¶¶ 83–99, *In re* NYSE Euronext S'holders Litig., C.A. No. 8136 (Del. Ch. Feb. 1, 2013)). Contract complexity's implications for enforcement costs are multifaceted, as increased costs of intricate interpretation may be offset by complex provisions' *ex ante* drafting specificity. *See, e.g.*, Scott & Triantis, *supra* note 28, at 818.

84. Jennejohn, *supra* note 57, at 75–76 (discussing constrained variation and hybrid (or partial) standardization among M&A and sovereign debt agreements); *see also* Zoom Interview with Firm Attorney II (Oct. 26, 2023) (describing a process of developing templates for clients that are client-favorable, but only slightly, anticipating some level of negotiation and deal-specific customization but, by avoiding extreme positions, minimizing the prospect of protracted bargaining).

85. Jennejohn, *supra* note 57, at 81–82. From a design perspective, Jennejohn's research also suggests that complex merger agreements are integrated systems conceived and held together by deal teams whose networks resemble the organizational logic of the transactions they orchestrate. *Id.* at 130–31. As noted above, this Article draws several parallels between M&A agreements and complex commercial contracts. The former having enjoyed more scholarly attention to date, this analogy both establishes footing for, and highlights opportunities for further research regarding, commercial contracts scholarship. In this vein, further study could examine whether Jennejohn's findings on flexible specialization in M&A transactions and the deal teams running them would translate and hold in commercial deals.

86. *See, e.g.*, Zoom Interview with Firm Attorney II (Oct. 26, 2023).

87. Contract templates may come from a variety of sources, including books of form agreements from legal publishers, form or model files maintained by law firms or clients, and model agreement forms made available

versions go a step further and provide for optional exceptions, or carve-outs, to liability limitations.[88] It remains atypical, however, for a template to contemplate a super cap feature.[89] Where templates are so critical to establishing baselines for contract design and negotiation, and where the landscape of commercial dealmaking has shifted to reveal newly established trends in liability limitation, failing to consider liability ladders in template design introduces unnecessary inefficiencies to commercial bargaining.

It is important to draw a distinction here. This Article does not suggest that proposing a specific super cap at the template stage is appropriate in most instances; indeed, to do so would prove disadvantageous in most bargains.[90] A specific in-template super cap proposal may only be appropriate in certain specific circumstances.[91] Instead, the suggestion here is for early proposal of liability laddering as a *framework*, with details of scale and scope to be resolved later. This approach offers the advantages of early acknowledgment discussed herein, while still allowing parties to exchange information and preserve latitude in strategic bargaining.

To maximize the opportunities for scale and scope economies made available by hybrid contracting, contract designers should consistently acknowledge the availability and utility of liability laddering in crafting the sophisticated templates that set the stage for hybrid contracting. By doing so, as explored further in Part II.D, deal lawyers can take an important step toward preempting deal fatigue and strengthening cross-efficiency by acknowledging the prospect of open bargaining loops and mitigating associated risk by running integrated negotiations, such as those related to data protection and limitation of liability, on braided tracks.

C. Rules, Standards, and Blending

Framing complex contracts as integrated systems has important implications for bargaining efficiency, contract enforcement, and performance motivation. The interaction of rules and standards in contracts generally, and liability ladders specifically, provides a useful illustration. Scholars of contracting and economics have explored the distinction between precise rules and vague standards in contracts, including through lenses of information signaling and investment efficiency at the front and back ends of the bargaining process.[92] Parties regularly shift transaction costs between bargaining's front and back ends

by bar associations or other continuing legal education organizations. ALAN S. GUTTERMAN & ROBERT L. BROWN, GOING GLOBAL: A GUIDE TO BUILDING AN INTERNATIONAL BUSINESS § 8:49 (2023–2024 ed.).

88. A template will often use brackets to flag optional provisions, to be considered on a transaction-by-transaction basis and included or removed based on deal specifics and party preferences.

89. *See, e.g.*, Zoom Interview with Firm Attorney II (Oct. 26, 2023); Zoom Interview with In-House Attorney V (Jan. 12, 2024) (recalling going to market, as vendor's counsel, with a template proposing a 5x super cap, and describing this as a unique situation in which hosted data was not sensitive, so proposing a pre-formulated super cap was a way to offer something to customers and streamline negotiations without too much risk); *see also* Downloaded reports on file with Author, *supra* note 50 and accompanying text.

90. *See, e.g.*, Zoom Interview with In-House Attorney V (Jan. 12, 2024) (noting that, if a vendor proposes a super cap of 5x, it should be ready for the customer to counter with 10x).

91. *See, e.g.*, sources cited *supra* note 89 and accompanying text.

92. *See generally, e.g.*, Scott & Triantis, *supra* note 28; Albert Choi & George Triantis, *Strategic Vagueness in Contract Design: The Case of Corporate Acquisitions*, 119 YALE L.J. 848 (2010).

according to efficiency considerations.[93] Where parties have sufficient information to create precise rules, they are more likely to invest in front-end drafting efforts, leaving less work for enforcing courts; conversely, when parties use vague standards, they shift transaction costs to the back end by leaving more interpretive work to the judiciary.[94] Precision itself, however, is context-specific and varied, and parties are tasked with multi-layered efficiency analysis in contract design: rules or standards, and, within each, how far to zoom in or out?[95]

Liquidated damages provide a helpful example in this context. Contracting parties might decide that incorporating liquidated damages into an agreement is an efficient choice "because [the parties] determine that their private information at the time of contracting is superior even to the court's market information *ex post*."[96] In this case, despite the expense associated with calculating, drafting, and negotiating, the *ex ante* precision of a liquidated damages rule may be more efficient than would be *ex post* information gathering and measurement of expectation damages—the broader standard (and legal default)—by a court.[97]

Liability ladders are likewise illustrative. Along the precision continuum, super caps are more specific than common law defaults and generalized damages caps, and typically less specific than liquidated damages. Liability ladders' capacity for risk categorization among multiple tiers gives parties a relatively simple way to customize front-end and back-end investments.[98] As such, stratified damages caps can often achieve incremental efficiencies and accomplish deal-saving compromises where other, less flexible tactics cannot. Moreover, the existence of a super cap for data breach signals that the parties agree, first,

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93. Scott & Triantis, *supra* note 28, at 818 (noting that the "choice between precise and vague terms shifts investment between the front and back end of the contracting process and thereby improves efficiency").

94. Choi & Triantis, *supra* note 92, at 883–85 (noting that front-end contracting costs can be reduced by using vague terms, which in turn can increase the risk and cost of litigation on the back end). *See also* Scott & Triantis, *supra* note 28, at 823 (noting that front-end costs are relatively well understood in the literature and involve the "parties invest[ing] in foreseeing possible future contingencies, determining the efficient obligations that should be enforced in each contingency, bargaining over the share of the contracting surplus, and drafting the contract language that communicates their intent to courts"). Conversely, "back-end transaction costs . . . are less well understood among contract theorists." *Id*. at 824.

95. *See, e.g.*, Naveen Thomas, *Rational Contract Design*, 74 ALA. L. REV. 967, 974–79 (2023) (illustrating the difficulty of this "cost optimization" analysis in theory and practice).

96. Scott & Triantis, *supra* note 28, at 819. Indeed, predictive problems of *ex ante* contract design do not exist in the *ex post* world of judicial enforcement, where courts enjoy the benefits of *ex post* informational advantage (in other words, the benefits of hindsight). *See id.* at 879.

97. *Id.* at 819.

98. The scope and extent of such customization varies from party to party and deal to deal. *See, e.g.*, Zoom Interview with In-House Attorney I (Nov. 17, 2023) (describing a detailed, data-driven approach to super cap formulation); Zoom Interview with Firm Attorney III (Nov. 29, 2023) (describing damages cap formulations as fundamentally arbitrary); *see also* sources cited *infra* notes 143–46 and accompanying text; Zoom Interview with Firm Attorney IV (Dec. 5, 2023) (describing a combined approach of data-driven formulations based on expected damages in the event of breach, situated within an acceptable range of super cap formulations based on market norms); Zoom Interview with Firm Attorney VII (Dec. 21, 2023) (referencing various methods for super cap formulation, including litigation experience, data value, industry studies, and insurance benchmarks); Telephone Interview with In-House Attorney IV (Jan. 11, 2024) (describing a combined approach to super cap formulation accounting for several factors, including breach history and deal size). When considering the formulation of dollar- or multiple-based super caps, of equal importance is how the occurrences subject to the super cap are defined; for example, how broadly or narrowly the contract defines a privacy- or security-related damage or liability. Zoom Interview with Firm Attorney IV (Dec. 5, 2023); *see also infra* note 108 and accompanying text.

that the likelihood of data breach—and the likelihood of the injured party's enforcement of its rights and protections in the event of such a breach—justify the *ex ante* contracting costs of drafting and negotiating super cap provisions, and, second, that data breach damages would be sufficiently expensive to justify the elevated cap.[99]

In complex, integrated systems, the line between rules and standards, and the appropriate level of precision within each, are further obscured. Where contract provisions are integrated—and, in many instances, thereby entangled—rules and standards are often, likewise, inseparable.[100] This entanglement has implications for judicial interpretation. While contracts whose provisions combine rules and standards "offer additional flexibility in setting boundaries for the court's discretion . . . they respond to the same tradeoff" of front-end and back-end cost.[101] For example, construction of a standard may be restricted where that standard is combined with a rule.[102] In turn, parties' conventional motivations for shifting risk through use of rules and standards must likewise be reconsidered in the context of complex, integrated contract systems.[103]

Drawing on the example of liability ladders as integrated mini-systems suggestive of larger contractual complexity further illustrates these points. As noted above, practitioner interviews suggest that, like M&A agreements, complex commercial contracts combine standardization and customization in intricate ways.[104] Likewise, super caps blur the lines between rules and standards within complex limitation of liability systems similar to what has been observed in M&A agreements generally.[105]

Super caps are rule-like in their numerical and subject matter specificity and might, for example, impose a heightened damages cap of 4x annual contract fees for data breach losses; in this way, bargaining parties invest up front in establishing bright line precision. Of course, super caps vary in intricacy and detail,[106] and in service of the accuracy and precision required of well-functioning rules, in determining proper parameters, lawyers crafting super caps must work closely with businesspeople to account for applicable factors, such as contracting parties' respective risk appetites, the likelihood and historical cost of loss, known risks, industry standards, and insurance coverage available to backstop liability. In this way, an additional level of information sharing is introduced into the process: the sharing of private information between contracting parties and their attorneys.[107]

99. Indeed, "[a] central tenet of contract theory is that enforcement (or the threat of it) affect[s] parties' behavior. Moreover, the more negative an enforcement, the better it should be at curbing bad behavior. But observations about enforcement often miss an important point: that the *probability* of the negative outcome also plays a role in affecting parties' behavior." Hwang, *supra* note 6, at 413.

100. Jennejohn, *supra* note 57, at 134 (using a regulatory provision in a publicly filed merger agreement to illustrate that "[i]t is not unusual, for example, for a vague standard such as a best efforts obligation to be embedded within a collection of related provisions, including bright line rules").

101. Scott & Triantis, *supra* note 28, at 840.

102. Jennejohn, *supra* note 57, at 135–37; *see also* Scott & Triantis, *supra* note 28, at 856 ("[P]arties to commercial contracts deploy precise terms alongside a standard. These combinations determine the boundaries of judicial proxy choice.").

103. Scott & Triantis, *supra* note 28, at 856.

104. *See, e.g.*, Zoom Interview with Firm Attorney II (Oct. 26, 2023), *supra* note 86 and accompanying text.

105. As noted above, further research is needed to confirm and bolster these observed similarities. *See, e.g.*, Jennejohn, *supra* note 85 and accompanying text.

106. *See, e.g.*, sources cited *supra* note 98 and accompanying text.

107. For further discussion, see *infra* Part III.B.

On the other hand, however, super caps drift toward standards territory by their fundamental reference to, and interaction with, other contract provisions that themselves rely heavily on standards. Data security provisions may include, for example, obligations to maintain sensitive data using appropriate, commercially reasonable, or industry standard degrees of care and to implement and maintain information security policies and procedures on a basis that is appropriate, commercially reasonable, or industry standard. In this way, super caps do not do all the information-sharing work up front; instead, they integrate rule-like precision with standards-based ambiguity, thereby leaving some (and, in some cases, significant) work for the back end.[108]

The logic of this blended approach becomes clear upon considering that, when crafting liability ladders, parties are balancing limited private information against unpredictable contingent outcomes. For example, in the data security space, a client may have private information regarding the scope and sensitivity of customer data a prospective vendor would need to access to perform contemplated services, and that vendor would have private information regarding its own security infrastructure, policies, procedures, incident history, historical incident cost, and insurance coverage. The parties may share some or all this information during diligence and negotiation. Balanced against this, however, are situation-specific contingencies, such as threat actor sophistication, and catastrophic events, such as major storms or network failures, that could impact data security—and may or may not constitute excusable force majeure events under the terms of the contract. Indeed:

> [P]arties will choose a specific proxy when the parties' private information is more important than the effect of contingencies on the choice of proxy. When the efficient proxies are highly state-contingent and less dependent on private information of the parties, the parties will be more inclined to use standards to delegate proxy choice to the courts, particularly if uncertainty is expected to resolve itself by the time the relevant performance is due.[109]

Nevertheless, despite these inherent imbalances and imperfections in cost shifting and information sharing, this Article suggests that, as with other front-end investments, some level of specificity in establishing and assigning super caps can improve litigation efficiency by confining the scope of available remedies.

Taking the analysis a step further, utilization of super caps, by placing limitations on *ex post* enforcement costs vis-à-vis negotiated constraints on available damages, might also impact whether parties choose vague or precise terms elsewhere in the contract and therefore increase cost-saving opportunity overall.[110] Put differently, through the use of targeted precision, multi-tiered super caps place data- and market-driven boundaries around risk that should allow for more standards-based drafting elsewhere in the agreement.

108. *See also, e.g.*, Scott & Triantis, *supra* note 28, at 816 n.2 (noting that an agreement "may be obligationally complete even though it is informationally incomplete"). Super caps often fall into this middle ground by lumping together various states, such as data breaches and intellectual property infringement, and providing for the same heightened damages cap across such states.

109. *Id.* at 842–43.

110. *Id.* at 818 ("A reduction in back-end enforcement costs should lead the parties to substitute more back-end for front-end investment by replacing precise provisions with vague terms."). Furthermore, "[b]y efficiently choosing between vague and precise terms, the parties can lower the cost of writing a more complete contract." *Id.* at 821. For further discussion regarding transactional use of customized damages categorization more broadly, see *supra* note 31 and accompanying text.

Interestingly, however, and as discussed in Part III.A, parties typically reserve super cap negotiations for the end of the bargaining process. Furthermore, practitioners noted in interviews that, once liability limitations are settled, parties often neglect to reexamine earlier-agreed provisions (even those that were integrated with and into limitations of liability), and, moreover, that it is not atypical for negotiators to make conditional concessions at various points in the bargaining process but then fail to revisit and secure the negotiated contingency. Buyer's counsel might agree, for example, to concede on a deal point such as a lower super cap, but only if certain qualifications to seller's representations and warranties are adjusted (or removed) in favor of the buyer; however, once the lower super cap is settled, the representations and warranties might never be revisited.[111] This process of incomplete contingent negotiation is referred to herein as an "open bargaining loop."

These findings suggest that, when contract designers take a linear approach to bargaining and do not revisit earlier-agreed, integrated language, liability ladders cannot meaningfully influence parties' choice of vague or precise terms elsewhere in the contract and therefore fail to achieve their full potential in impacting negotiation cost-savings overall. Instead, considering hybrid contracting and rules-standards analysis together, Part II.D will argue that inclusion of super caps might impact sophisticated parties' bargaining efficiency in a different way: if, armed with sophisticated templates that contemplate liability laddering concepts, parties know they can manipulate back-end costs by placing contractual limits on liability, and if they also know they can create context-specific, multi-tiered mechanisms for doing so, they should be able to reduce *ex ante* cost and achieve "cross-efficiency" by settling for less expensive, vague standards elsewhere in the contract. Furthermore, when a template makes clear that liability laddering is an option, it imparts powerful knowledge on both parties that shifts the scale against the outsized leverage (and misaligned incentives) of concern to cybersecurity strategists.

D. Cross-Efficiency and Deal Fatigue

In a modern contracting environment characterized by mass customization and attendant opportunities for scale and scope economies,[112] a pipeline of efficiency runs its course through the bargaining process. As with any pipeline, however, there is risk of leakage. Transactional attorneys, as deal architects, are well positioned to buttress the bargaining process and mitigate the risk of efficiency leaks. This can be done using a two-pronged approach.

First, and quite simply, contract designers should more consistently acknowledge the availability and utility of super caps in creating sophisticated templates to guide the design of hybrid agreements.[113] As noted in Part II.B, a preliminary review of current commercial agreement forms does not suggest that, at present, tiered damages caps are regularly

111. *See, e.g.*, Zoom Interview with Firm Attorney I (Oct. 16, 2023) (observing that deal lawyers can find themselves "accepting positions that you wouldn't really otherwise accept in reliance on terms that don't end up being part of the final contract").

112. *See, e.g.*, *supra* notes 84–85 and accompanying text.

113. This suggestion will be considered in more detail in Part III. One practitioner interviewed for this Article had just started incorporating the super cap concept in client templates. The practitioner had not observed this practice elsewhere in the market but began trying it out as a "brand new" approach in 2023 so that, "when the time comes to negotiate, the concept is already in there, and it's just about the numbers after that." Zoom Interview with Firm Attorney II (Oct. 26, 2023).

included in template limitation of liability provisions.[114] Prompting bargaining parties to consider liability ladder concepts from the early stages of contract negotiations (i.e., from the template stage) should encourage the cross-efficiencies referenced above by establishing "known exposure" and introducing informed nuance to traditional rules-standards analyses elsewhere in the bargaining process.[115] Public policy considerations further support early acknowledgment of liability laddering. If a software vendor with significant leverage negotiates with a customer that is unaware of liability laddering as an option, the vendor may simply argue that it cannot do business with uncapped liability for data-related contingencies; the customer, in need of the subject software solution, will often accept this argument and sign on the dotted line. If that customer were presented with a template contemplating a liability laddering framework, the vendor's "no can do" argument would be tougher to swallow. Instead, the parties might more readily arrive at a compromise position wherein both parties accept some risk—and, thereby, additional motivation for diligent performance.[116]

Second, and relatedly, deal lawyers should preempt deal fatigue by acknowledging the prospect of open bargaining loops and running integrated negotiations, such as those related to data protection and limitation of liability, on braided tracks. Integrated negotiation should encourage cross-efficiency and closing of bargaining loops which, if left open, could result in unanticipated risk allocation and liability outcomes.[117]

In conclusion, Part II suggests that liability ladders, while suggestive of larger contractual complexity, nonetheless present opportunities for efficiency maximization. Within the context of mass customization and rules-standards analyses in integrated systems, liability laddering highlights an opportunity for cross-efficiency and value creation by deal lawyers: by manipulating early-stage contracting processes, such as template development, to contemplate liability ladders as a framework within standard limitation of liability provisions, and by intentionally negotiating integrated contract provisions on braided tracks so as to ensure closure of bargaining loops, contract designers can reinforce well-functioning processes and minimize efficiency leakage.

III. BARGAINING CHRONOLOGY AND INFORMATION SHARING

Having established in Part I the relevance of liability laddering in modern contracting within larger discussions of risk allocation, and having applied in Part II theoretical concepts including contract design and contractual complexity to liability ladders, this Part builds upon the foregoing analyses to examine bargaining chronology and information sharing in complex commercial transactions. Through an examination of existing publications and original practitioner interviews, Part III.A will map out standard bargaining chronology in commercial transactions and locate super cap discussions along the timeline.

114. *See, e.g.*, *supra* note 89 and accompanying text.

115. *See* Zoom Interview with In-House Attorney II (Dec. 22, 2023) (describing a recent negotiation in which inclusion of super caps for what would otherwise be uncapped liabilities prompted the attorney's company, as vendor, to accept atypically broad buyer protections in integrated provisions).

116. *See, e.g.*, *supra* note 73 and accompanying text.

117. Recent scholarship observes that "the outcome of a bargaining strategy with respect to one [interdependent governance] mechanism may affect the strategy with respect to another mechanism" and suggests looking to political science for modeling guidance, including work exploring ensemble—or "nested"—game play and impacts on player strategy, such as cross-cutting and spillover. Jennejohn, *supra* note 57, at 141–42 & n.290.

From there, Part III.B will consider layered information sharing in commercial dealmaking generally and liability limitation specifically, and Part III.C will explore prescriptive implications of these observations.

A. Bargaining Chronology

Due to the cognitive load of addressing multiple difficult issues at once, business parties and legal practitioners regularly use some combination of modularity and customization in complex business transactions—commercial, M&A, and otherwise—to make bargaining more manageable.[118] Even within a single definitive agreement, such as a Master Services Agreement, negotiation of various provisions is often non-contemporaneous. For example, deal lawyers may work their way through provisions on payment and termination rights on one call, saving discussions on representations and warranties for the following week. While fundamental business terms or "gating" items, such as price, are typically settled at the outset of commercial negotiations and before lawyers are involved,[119] resolution of other important provisions is often saved for later.[120] Resolution of thorny issues, such as indemnification and limitation of liability (and, by extension, super caps), which often require careful consideration and contingency analysis—and may result in intense, if not contentious, negotiations—is typically saved for last.[121] Opinions differ on the reasons for this delay. Some practitioners deem postponement unavoidable since the adequacy of a cap is inexorably dependent on the substance and scope of each party's executory obligations;[122] others consider the hold-off to be largely strategic;[123] and still others have

118. Hwang, *supra* note 6, at 389 (describing "the cognitive load of negotiating multiple issues at once" and using preliminary M&A agreements as an example of "a way to modularize complex deals—to break complex transactions into smaller pieces, for the purpose of making them easier to handle"); Cathy Hwang, *Unbundled Bargains: Multi-Agreement Dealmaking in Complex Mergers and Acquisitions*, 164 U. PA. L. REV. 1403, 1418 (2016); *see also* Jennejohn, *supra* note 57, at 95–98 (introducing flexible specialization as an alternative approach to complex contract design in the context of "mass customization" of contracts combining custom and standard terms).

119. *See, e.g.*, *supra* note 61–63 and accompanying text.

120. Zoom Interview with Firm Attorney I (Oct. 16, 2023) ("The most material risk-shifting provisions, the most obvious risk-shifting provisions, are the ones that are necessarily last to be resolved. They're . . . not necessarily the last to be addressed. But you don't end up resolving them until the final-stage horse trading.").

121. *See, e.g.*, Zoom Interview with In-House Attorney I (Nov. 17, 2023) (describing agreement on limitation of liability—including super caps—as the "bow on the package . . . that happens at the end").

122. *See, e.g.*, Zoom Interview with Firm Attorney I (Oct. 16, 2023); Zoom Interview with In-House Attorney I (Nov. 17, 2023). These observations are indicative of the contingent and integrated nature of, and cognitive load associated with, these provisions. *See, e.g.*, *supra* note 81 and accompanying text; Zoom Interview with Firm Attorney I (Oct. 16, 2023) (describing negotiations around super caps, and specifically those related to data security, as nuanced discussions wherein lawyers serve as moderators among operational leaders to ensure the parties share adequate information, including with respect to respective needs and capabilities, to inform appropriate decisions around liability limitations). *See also* Jennejohn, *supra* note 57, at 104 (regarding implications of cognitive load, or "the extent to which an agreement taxes the faculties of the humans designing the contract[,]" on contractual complexity measurements).

123. *See, e.g.*, Zoom Interview with Firm Attorney III (Nov. 29, 2023); Zoom Interview with Firm Attorney V (Dec. 12, 2023); Zoom Interview with Firm Attorney VII (Dec. 21, 2023) (observing that a super cap is usually not proposed early because it's neither party's best position: "a super cap is usually Plan B or Plan C . . . where you are not getting to the liability level you want, then a super cap is meeting in the middle").

observed liability ladders creeping forward on typical bargaining timelines, perhaps due to increasing familiarity with super cap concepts over time.[124]

As suggested by these various rationales, situating liability laddering toward the end of the bargaining timeline is efficient for several reasons. First, since liability ladders introduce fundamentally integrated provisions that interact closely with other sections of a contract, negotiating them early in the process (i.e., before other terms are finalized) could be counterproductive; caps, carve-outs, and super caps would need to be revisited to confirm accuracy and appropriateness once other conflicts are resolved.[125] Similarly, practitioners observed that the operational considerations underpinning—and thus also integrated with—a super cap analysis can also change over the course of a bargain, and those business-level details must be resolved before a meaningful super cap can be established.[126]

Relatedly, since super caps feature characteristics of rules (often effected through combination with standards),[127] with attendant up-front investment required to achieve appropriate precision, it might be inefficient for parties to attempt resolution on super cap details before sufficient progress has been made in the larger negotiation to elicit mutual confidence in a successful closing.[128] Indeed, by the time parties have come to an agreement on most key terms, they have made significant and specific investments in the transaction's success,[129] and it is from this posture that they turn, at last, to outstanding high stakes concerns such as limitations of liability. Mutual sunk cost serves as a compelling incentive to resist opportunistic behavior, resolve outstanding items, and get the deal done.[130]

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124. Zoom Interview with Firm Attorney IV (Dec. 5, 2023); Zoom Interview with Firm Attorney VII (Dec. 21, 2023) (observing that a super cap might be proposed earlier in a negotiation between parties who have bargaining history, but if contracting parties have not negotiated with each other before, part of their hesitation to propose compromise positions is a function of taking a few bargaining rounds to feel each other out); *see also* Telephone Interview with In-House Attorney IV (Jan. 11, 2024) (suggesting that practitioners may delay resolution of super cap negotiations, in part, because super caps are relatively new and unfamiliar as compared to more established provisions that can be resolved more quickly due to familiarity of applicable considerations, respective positions, and acceptable fallbacks).

125. Zoom Interview with Firm Attorney II (Oct. 26, 2023) ("[W]e're not going to play around with numbers and what is and is not in super cap and what is uncapped, *et cetera*, until we understand fully what you're able to give us, and what your obligations are. And then we can assess the risk.").

126. Zoom Interview with Firm Attorney I (Oct. 16, 2023).

127. *See, e.g.*, sources cited *supra* notes 100–08 and accompanying text.

128. *See, e.g.*, Zoom Interview with Firm Attorney III (Nov. 29, 2023) (suggesting that an unintended advantage of delaying liability limitation discussions is that, by the end of negotiations, the parties have worked through many difficult, complicated issues and are mutually invested in getting the deal done; from this perspective, if delay bolsters mutual investment, it may be worthwhile to hold off).

129. *See*, *e.g.*, Hwang, *supra* note 6 at 393–94, 400 (arguing that, as parties resolve uncertainty during negotiations, a deal accumulates momentum and behavior-influencing "stickiness" (i.e., parties' mutual commitment to the transaction and likelihood of closing on previously agreed business terms)). Hwang focuses on non-binding preliminary agreements in M&A transactions and argues that, even without preliminary agreements and any associated fear of formal enforcement—judicial enforcement of such preliminary agreements being weak—deal momentum has a strong influence on parties' behavior. *Id.* at 400–12. In the context of commercial contracts, where preliminary agreements are less commonplace, Hwang's deal momentum argument is readily applied and, perhaps, amplified.

130. *See, e.g.*, Daniel Kahneman & Amos Tversky, *Prospect Theory: An Analysis of Decision Under Risk*, 47 ECONOMETRICA 263, 278–79 (1979) (describing how individuals are disproportionately averse to incurring

Finally, super caps are often seen as bargaining chips, best kept back in the proverbial pocket and presented only when strategically appropriate—for example, as a fallback alternative to uncapped liability for certain damages cap exclusions.

Notwithstanding these considerations, however, and as examined in Part II.D, deferring all super cap discussions for the end of negotiations can also create unintended efficiency leakage.[131] If integrated provisions such as super caps are not considered in conjunction with the provisions implicated by their terms, opportunities for efficiency elsewhere in the contract might be lost, and bargaining loops might be left open. This Part will now consider each proposed justification for saving super cap discussions until the end of negotiations, offering a challenge to each, thus strengthening the prescriptive suggestion that practitioners should reimagine conventions around bargaining chronology.

First, this Part identifies super caps' fundamentally integrated nature as one efficiency-based justification for saving super cap discussions for the end of negotiations, since any early-established super cap structure would need to be revisited later to confirm accuracy and appropriateness once other conflicts are resolved. The reverse is also true. Just as a pre-established super cap would need to be readdressed after the resolution of its integrated provisions, so too should those integrated provisions be readdressed after the resolution of the super cap. Unfortunately, in practice, this revisiting does not consistently occur in either direction; the bargaining loop, as it were, remains open.[132] Instead of choosing one direction or the other, negotiating integrated provisions in tandem, as proposed in Part II.D, would push bargaining loops toward closure and minimize efficiency leakage.[133]

This Part further suggests that parties might not be willing to invest in super caps' rule-like precision without a level of buy-in not often achieved until the end of negotiations; in other words, parties might require comfort that their deal will close before investing the time and legal resources necessary to negotiate and agree to multi-tiered damages caps. Considered alongside the other challenges put forth here, however, this suggestion falls short. By acknowledging the risks of open bargaining loops and strategic gamesmanship, and by establishing mutually satisfactory liability parameters within which to maneuver on other deal points, parties can signal commitment and establish trust up front, thereby making their deals sticky and encouraging efficient closure.

Finally, this Part proposes that super caps might be held back for legitimate strategic reasons. A seller might hope that its reasonable, standard damages cap will go through without exception, and a buyer might expect to require uncapped liability on certain high-risk occurrences; neither of these party-specific ideals contemplates the middle ground presented by a super cap, and perhaps, under this line of thinking, only if a party cannot get

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losses); *see also* Larry A. DiMatteo, *Strategic Contracting: Contract Law as a Source of Competitive Advantage*, 47 AM. BUS. L.J. 727, 778 (2010) ("Significant mutual risk incentivizes the parties to the joint venture to collaborate in the goal of making the venture a success, at least in order to recover their sunk costs."). Of course, informal enforcement may play a role as well, particularly within tight-knit industries where reputational damage due to late-stage deal failure may jeopardize future business dealings. Hwang, *supra* note 6, at 399.

131. *See, e.g.*, *supra* note 117 and accompanying text.

132. *See, e.g.*, sources cited *supra* note 111 and accompanying text (discussing the challenges faced by deal lawyers in tracking and revisiting contingent concessions); Zoom Interview with Firm Attorney I (Oct. 16, 2023) (noting that, in pushing toward finalizing a deal, everyone wants to keep moving forward, and a bargaining party, in failing to revisit integrated provisions or contingent positions, "loses the forest for the trees, so to speak, and loses some of the trees when focusing on the others").

133. *See, e.g.*, sources cited *supra* notes 113–17 and accompanying text.

exactly what it wants should the super cap concession be put forth. However, withholding resolution of material issues, such as limitations of liability, can also be used to exacerbate leverage gaps and force less powerful bargaining parties into uncomfortable risk positions. Indeed, in practice, deferring liability limitation discussions to the end of the bargaining process has become an established policy for some large companies with significant leverage. The delay can be used to a buyer's advantage if the seller requests a super cap and the buyer knows the seller needs to close the deal before a certain date; in this situation, if the buyer refuses to engage in liability limitation discussions until the very end of negotiations, the seller will be under added pressure to get the deal done and might agree to unfavorable terms. It might be argued that this is an unavoidable truth; indeed, suggesting that parties with leverage should not use it is an admittedly unrealistic proposition.[134] However, early acknowledgment of super caps' availability and utility, whether through incorporation into templates as optional language or otherwise, should make it harder for lawyers and business parties to ignore them—and should offer earlier opportunities to challenge any refusal to discuss them.[135]

As such, while it would be inefficient to negotiate super caps first and alone, negotiating them last and alone likewise introduces unintended inefficiencies. This Part's consideration of bargaining chronology, as informed by practitioner interviews, amplifies the proposition set forth in Part II.D, namely, that contract designers can maximize cross-efficiencies and reinforce contract processes by incorporating liability ladders into early-stage contract discussions and intentionally negotiating integrated contract provisions in tandem.[136] The earlier and more often a topic is raised, the more difficult it is to ignore; furthermore, concessions and demands can be withheld, proposed, and exchanged in any number of other ways, and by negotiating integrated provisions together, transactional attorneys can strengthen both processes and outcomes in dealmaking.

B. Information Sharing

At the outset of a commercial relationship, contracting parties may know little about each other beyond reputational insights and publicly available data. This information asymmetry is reduced throughout the dealmaking process—albeit to varying degrees—through business, financial, and technical diligence; negotiations; and disclosure in deal documents themselves. The gradual and nuanced process of information sharing over the course of a commercial bargain is referred to in this Article as "layered information sharing" due to the various temporal and interpersonal aspects of disclosure in this context. From a temporal perspective, in the early stages of a deal, parties may hesitate to share too much. During this "kicking the tires" phase, a seller might provide high-level marketing materials about its products, services, and general capabilities, but it might withhold the time and effort required to share more technical detail until the deal has gained more momentum.[137]

134. As one deal lawyer put it, "what you can and can't do is all pegged to leverage." Zoom Interview with Firm Attorney II (Oct. 26, 2023).

135. *See, e.g.*, *supra* note 116 and accompanying text.

136. *See, e.g.*, sources cited *supra* notes 113–17 and accompanying text.

137. This bargaining process cost shifting is reminiscent of contract designers' tendency, in selecting rules or standards, to shift transaction costs between bargaining's front and back ends according to efficiency considerations. *See, e.g.*, Scott & Triantis, *supra* note 28, at 818; *see also supra* note 93 and accompanying text (discussing efficiency considerations).

As both parties invest resources in pursuit of a deal, commitment is built, and more (and more detailed) information is shared over time.[138] From an interpersonal perspective, commercial information sharing is likewise layered: business parties share information with each other (and within their own organizations), clients share information with their attorneys, and attorneys share information with their counterparts (and within their own firms), and attorney-shared information, including through negotiating, drafting, and revising definitive deal documents, sends signals back to business parties.[139]

In the context of liability laddering, the spectrum of specificity used in crafting super caps evidences wide-ranging inconsistency of information sharing at all levels. As discussed earlier, super caps come in a variety of flavors; some are set at an established dollar figure, while others are based on a multiple of transaction value. Given the disconnect that has emerged between contract value and data security risk,[140] it is interesting that the value multiple remains so prevalent a construct in formulating super caps. It may be that the momentum of tradition in connecting contract values to damages caps is so strong as to retain a lingering grip on contract designers, though the reason is likely more nuanced. For example, absent ratchet-up features, a dollar-based super cap does not grow with a multi-year contract. On this point, one practitioner described "land and expand" contracts as justification for retention of a value multiple; in this context, a customer might start off at $200,000 annual spend, in which case a $1,000,000 super cap for data security may be appropriate. However, if spending under that contract grew to $5,000,000 annually, the $1,000,000 super cap would no longer be quite so "super," and parties generally dislike having to renegotiate material contract provisions at renewal—or worse, mid-term. This practitioner prefers a combined multiple-plus-floor formulation, protecting against the risk of insufficient super caps due to modesty, or exponential growth, of annual spend.[141]

Practitioners describe diverse philosophies and methods for formulating liability ladders. Some deal lawyers do not see much meaningful information sharing happening at all;[142] others describe largely market-driven analyses;[143] others observe detailed, data-

138. Thereafter, too, as information is shared more widely across the market, trends such as liability laddering spread and become established over time. Some practitioners expressed surprise that it has taken so long for super caps to become market standard and speculated that the isolating effects of the COVID-19 pandemic may have chilled interpersonal information sharing on this concept over recent years. *See, e.g.*, Zoom Interview with In-House Attorney I (Nov. 17, 2023). Additional research would be needed to explore this possibility.

139. *See, e.g.*, Zoom Interview with Firm Attorney VII (Dec. 21, 2023) (observing that negotiating liability limitations can smoke out material information; for example, a vendor's insisting on low liability limits for data security might encourage a customer to inquire about justifications, which justifications (such as prior data breaches) could introduce new considerations to the larger transaction).

140. *See, e.g.*, sources cited *supra* note 44 and accompanying text.

141. Zoom Interview with In-House Attorney V (Jan. 12, 2024).

142. Zoom Interview with Firm Attorney III (Nov. 29, 2023) (describing the prospect of liability limitation, from the start, as arbitrary, and arguing that, by extension, in agreeing to a super cap, "it's not a major conceptual change to decide that it's arbitrary at a different number").

143. Zoom Interview with Firm Attorney I (Oct. 16, 2023) (describing a recent negotiation in which a provider shared that it had just undertaken a significant market research project to inform provider's policy on acceptable super cap multiples); Zoom Interview with Firm Attorney II (Oct. 26, 2023) (describing a market-driven range of acceptable super cap multiples, informed by additional layers of information sharing regarding data access and deal-specific risk exposure).

driven information sharing within and between organizations;[144] and still others see combined approaches that blend market research with organization- and deal-specific data points.[145]

To the extent liability laddering's primary functions are meaningful,[146] their formulation should likewise be meaningful. Not all organizations have the resources to engage in granular contingency cost analysis for every commercial deal, but practitioner interviews generally support the view that market awareness and peer reference can go a long way in establishing a reasonably appropriate super cap. Unfortunately, the typical bargaining chronologies explored in Part III.A can exacerbate information asymmetries surrounding super caps. Where contract designers fail to acknowledge the availability of liability ladders until the final stages of negotiations, at which point parties are often under significant time pressure to close a deal, the work required to narrow layered knowledge gaps will be daunting at best.

C. Prescriptive Implications

Having considered the implications of bargaining chronology and information sharing as related to liability ladders in Parts III.A and III.B, respectively, this Part will now discuss the prescriptive implications of the considerations explored above. Turning first to chronology, the integrated nature of liability ladders makes them complex candidates for early attention. If a super cap cannot be meaningfully settled until related components of commercial negotiations are resolved, and if the introduction of a super cap can work to resolve outstanding issues toward the end of a bargain, then situating liability ladder discussions later along a deal's timeline makes logical sense. However, this view oversimplifies a nuanced scenario.

Liability ladders are, in essence, compromises. They establish neither uncapped liability, as a buyer would prefer, nor uniform, low-dollar ceilings on all allowable damages, as a seller would prefer. The solution is not all or nothing. Likewise, with respect to bargaining chronology, the answer need not be only first or only last. Instead, a reasoned middle ground is possible. Acknowledging early in negotiations that liability laddering is an option, while tabling resolution of detail for later, when the necessary information has been shared, would empower contract designers to use the tools they already have to ensure contingency loops are closed. Early acknowledgment would allow bargaining parties to preempt deal fatigue by contending head-on with the prospect of open bargaining loops and running integrated negotiations, such as those related to data security and limitations of liability, on braided tracks.[147] Furthermore, the benefits of early acknowledgment would be amplified in certain situations, such as for a seller wanting to streamline negotiations;

144. Zoom Interview with In-House Attorney I (Nov. 17, 2023) (describing a process for formulating liability ladders involving detailed internal analysis and extensive counterparty discussion regarding scope, volume, and duration of data access, coupled with a clear understanding of built-in system protections, policies and procedures, and negotiation outcomes on indemnities, warranties, information security terms, business continuity, and disaster recovery requirements).

145. Zoom Interview with Firm Attorney IV (Dec. 5, 2023) (describing a hybrid process for establishing super caps whereby contract designers, informed by a general idea of what's market, work within those parameters to drill down on scope of services and nature of likely expenses in the event of a breach).

146. *See generally infra* Part IV.

147. *See generally supra* Part II.D.

there, proposing a template with liability laddering features would establish expectations (and a negotiating anchor) from the start and could build foundational goodwill by recognizing areas of heightened risk and signaling willingness to assume more of the burden.[148] Finally, consistent use of templates contemplating liability ladder frameworks would further familiarize market players with the super cap concept, build network effects and increase usage, and make incremental progress—through private ordering—toward the accomplishment of strategic risk-shifting objectives such as those laid out in the Biden Administration's Cybersecurity Strategy.[149]

When more customers and vendors are aware of the viable middle-ground, i.e., that neither party must carry the full weight of risk, each is more likely to put some proverbial skin in the game, and incentives for proper security and business innovation are strengthened. In sum, by manipulating early-stage contracting processes, such as template development, to contemplate super caps as valuable tools within standard limitation of liability provisions, and by intentionally negotiating integrated contract provisions on braided tracks to ensure closure of bargaining loops, contract designers can reinforce well-functioning processes, further strategic objectives, and minimize efficiency leakage.

These prescriptive arguments have implications for the transactional lawyer's role. In dealmaking, lawyers serve as architects of deal processes and timelines, influencing transaction cadence and chronology in ways that are substantively impactful for deal outcomes. This architectural analogy has both positive and negative implications. Deal lawyers can thoughtfully and intentionally design transactions to maximize efficiency and value by avoiding the pitfalls of imagined realities—such as a proposition that damages caps must be all or nothing—or they can remain reactive and uninformed, thus feeding information asymmetry and deal delays back into the cycle. As one practitioner described it, lack of information sharing "leads to dead deals or deals that stagnate . . . because legal slows it down."[150]

When considering information sharing, it is imperative to underscore the connections between and among information sharing, compressed timelines, and deal fatigue. The efficiency leakage endemic to fast-paced dealmaking is fed by, and feeds, cycles of time pressure. Information asymmetries are gradually—and, often, only partially—resolved

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148. Zoom Interview with Firm Attorney II (Oct. 26, 2023).

149. THE WHITE HOUSE, *supra* note 38, at 20. The Cybersecurity Strategy describes the world's entry into "a new phase of deepening digital dependencies" as characterized by collapsed boundaries and exposure of essential systems. *Id.* at 2. In furtherance of infrastructure defense, threat actor disruption, and improved security and resilience, the Cybersecurity Strategy lays out various regulatory, collaborative, fiscal, operational, and legislative objectives. *Id.* at 4. One such objective takes direct aim at software vendors failing to adhere to best practices in cybersecurity and relying, for protection, on contractual protections limiting or disclaiming their liability for data breach incidents, warning that "[t]oo many vendors ignore best practices for secure development, ship products with . . . known vulnerabilities, and integrate third-party software of unvetted or unknown provenance. Software makers are able to leverage their market position to fully disclaim liability by contract, further reducing their incentive to follow secure-by-design principles or perform pre-release testing." *Id.* at 20. The Cybersecurity Strategy proposes federal legislation that would establish heightened standards of care and place limitations on permissible liability limitations in contracts for high-risk software, though details are scarce and observers skeptical about prospects for enactment in the current political climate. *Id.*; Skye Witley, *Software Maker Liability Is Elusive Target of US Cyber Plan*, BLOOMBERG L. (Mar. 3, 2023), https://news.bloomberglaw.com/privacy-and-data-security/software-maker-liability-is-elusive-target-of-biden-cyber-plan [https://perma.cc/3XXT-PHHA].

150. Zoom Interview with Firm Attorney II (Oct. 26, 2023).

over the course of a bargain, but in a time-pressed environment, parties sometimes fail to revisit earlier-agreed, integrated provisions once relevant data is shared. The compromise approach suggested above, i.e., early acknowledgment of liability laddering as a viable option, with later-stage resolution of detail, would do much to mitigate these issues. Indeed, early proposal of liability ladders can smoke out, right away, information regarding parties' risk tolerance and fundamental business concerns: important indicators in negotiating other provisions.[151]

Of course, even earlier and more freely flowing information sharing will have limited utility without appropriate policies and procedures. For example, in determining what contingencies should be subject to super caps—and in determining what the super cap should be—lawyers often work with incomplete information. Even in repeat deals with the same client, information that should be cumulative can be lost along the way if appropriate knowledge management practices are not put in place. Focused attention on improving this process, both within business clients' organizations and within law firms, should positively impact the benefits of early information sharing, thereby increasing bargaining efficiency and adding significant value to deals.

IV. SIGNALING SIGNIFICANCE: LIABILITY LIMITATIONS' ESSENTIAL SECONDARY FUNCTIONS

Enforceable contract provisions should primarily, in theory, do what they say. Covenants should obligate parties to take or refrain from specified actions, termination provisions should establish when and how parties can terminate an agreement early, and payment provisions should require payment of established fees within a specified period. Limitations of liability, too, should—quite obviously—limit the potential liability of one or both parties to a contract. One might expect that this limitation, in its primary function of sheltering a party from staggering exposure to uncapped damages, would be quite meaningful in terms of practical impact. In turn, tailored super caps for high-risk items should likewise prove meaningful vis-à-vis their primary function of providing buyers an elevated remedy while allowing sellers meaningful protection from uncapped damages. Deal lawyer interviews generally indicate that limitations of liability and super caps matter.[152] However, as will be discussed in Part IV.A, practitioner impressions of the nature and extent of liability laddering's primary impact are somewhat varied.

This Article argues that the full value of a liability ladder extends beyond its primary function. Liability laddering also serves important signaling functions that are critical to contract parties' stakeholder engagement, prospects for growth and successful exit events, and overall business success. This Part will investigate these claims. Part IV.A will explore in more detail the primary function of liability ladders, considering their adequacy and

151. *See*, *e.g.*, *supra* note 139 and accompanying text.

152. *See, e.g.*, Zoom Interview with Firm Attorney II (Oct. 26, 2023); Zoom Interview with In-House Attorney I (Nov. 17, 2023). Scholars, on the other hand, have struggled to draw clear connections between isolated deal terms and anticipated outcomes. *See generally, e.g.*, Adam B. Badawi, Elisabeth de Fontenay & Julian Nyarko, *The Value of M&A Drafting* 1 (Duke L. Sch. Public L. & Legal Theory Series No. 2023-14, 2023), https://ssrn.com/abstract=4337075 (analyzing "[h]ow much . . . different . . . deal terms matter"). Recent research on M&A deals has taken a novel approach to exploring questions around deal term importance by examining which provisions deal lawyers prioritize when negotiating under significant time pressure. *Id.*

impact on risk allocation, and Part IV.B will consider distributed leverage, transactional commitment, and risk management as crucial secondary functions of liability laddering. This Part will conclude by discussing the implications of these secondary functions for modern commercial dealmaking.

A. Primary Functions

Notwithstanding the difficulties of tracking a contract provision's real-world impact, the primary function of a liability limitation generally, and a super cap specifically, is seemingly obvious: to limit liability.[153] Even so, practitioners differ in their perspectives as to the nature and magnitude of liability laddering's practical influence. While some deal lawyers feel strongly that liability ladders are effective in allocating risk in an efficient and appropriate manner,[154] others consider any limitations on high-risk items such as data breach to be fundamentally arbitrary. This Part will consider these perspectives in turn.

In considering the effectiveness of liability laddering, some practitioners draw on concepts of fairness and consider liability ladders to be appropriate (if not perfect) mechanisms for addressing deal- and company-specific risk allocation due, in part, to the mutual compromise required to resolve them.[155] Others, in contrast, see limitations of liability generally, and super caps specifically, as arbitrary and largely disconnected from fairness; as one practitioner put it, "if we wanted to be fair, we'd leave it to the court."[156] From the latter perspective, any liability cap—standard or super—be it 1x, 3x, or 10x, is significantly lower than uncapped liability and so, by nature, is fundamentally arbitrary;[157] of course, the technical, data-driven approaches to super cap formulation described in Part III.B might mitigate some of the arbitrariness of liability laddering, but these techniques require sophistication and resources not available to all commercial dealmakers.[158] Conversely, for a vendor experiencing a massive data breach impacting many or all of its customers, super caps in those customer agreements may ultimately prove irrelevant in the face of what might be an "extinction event" for a company, when the main issue becomes whether or not the company will survive.[159]

Industry groups have weighed in as well. A recent study by World Commerce & Contracting, for example, identified limitation of liability as among the most heavily negotiated contract provisions but located it lower on the list of provisions deemed important in

153. *See, e.g.*, Schnuck Mkts., Inc. v. First Data Merch. Servs. Corp*.*, 852 F.3d 732, 737–40 (8th Cir. 2017) (demonstrating the court's willingness to enforce liability limitation clauses in the data breach context and, in calling attention to the fact that the defendants did not argue for application of the super cap, seeming to suggest that such a cap could have been enforced had the parties raised the issue).

154. *See, e.g.*, Zoom Interview with Firm Attorney II, (Oct. 26, 2023); Zoom Interview with In-House Attorney I (Nov. 17, 2023); *see generally supra* note 152 and accompanying text.

155. *See, e.g.*, Zoom interview with In-House Attorney I (Nov. 17, 2023).

156. Zoom Interview with Firm Attorney III (Nov. 29, 2023) ("[I]t's utterly arbitrary. And, in a way, that's a good thing . . . because we're just [going to] see if we can agree on an arbitrary figure that no one thinks is fair . . . it's just: this is the risk we can stomach.")

157. *Id.* (observing that, at its core, "the value of the limit of liability is to avoid runaway liability" and that any super cap, however formulated, will do this job).

158. *See, e.g.*, sources cited *supra* notes 143–45 and accompanying text.

159. Zoom Interview with In-House Attorney III (Jan. 2, 2024) (observing that super caps are meaningful for one-off issues impacting a small number of customers, but if a massive breach impacts an entire customer base, liability laddering becomes less important).

contractual outcome achievement, observing that risk-dominated negotiations often come at the expense of trust building and value creation.[160] From this perspective, neither a buyer's protective, incentive-pushing efforts, nor a seller's attempts to minimize commitments and consequences, effectively create positive performance incentives, and furthermore, "it is possible that this focus on failure also contributes to elements of vagueness or lack of clarity around critical issues such as scope and goals and roles and responsibilities."[161] Notably, the early-stage process manipulation this Article proposes could meaningfully address these concerns. Because up-front acknowledgment of liability laddering would streamline negotiations and establish trust for the reasons discussed in Part III, and because of the mutual concessions required as a baseline for meaningful consideration, liability laddering should, in fact, mitigate these broader concerns around limitation of liability generally. Additionally, implementation of liability ladders by running negotiation of integrated provisions on braided tracks, as proposed in Part II.D, would offset concerns about failure-focused negotiations coming at the expense of critical commercial deal points.

Despite their flaws, most practitioners say—and bargaining priorities indicate—that liability ladders are meaningful.[162] Liability laddering may not be perfect in imposing tailored constraints on available damages for categorized risks—its primary function—but it nonetheless does important work in critical, existential signaling to internal and external stakeholders and in getting deals done. Part IV.B will explore these essential secondary functions.

B. Distributed Leverage, Transactional Commitment, and Risk Management

The impact of leverage on dealmaking is obvious. This Part begins with a subtler point. It is not just leverage itself, but signals of leverage between contracting parties, that impact the tone and tempo of negotiations. Limitations of liability generally, and liability ladders specifically, prove fertile ground for this flavor of interparty signaling. A seller with all the leverage will require low liability limits without exception; a buyer with all the leverage will reject contractual liability limits altogether. A seller with most (but not all) of the leverage may increase the damages cap but refuse carve-outs; a buyer with most (but not all) of the leverage may agree to liability limits but require a high damages cap and numerous carve-outs. Liability laddering, in other words, will not exist where one party has all (or most) of the power, so its very presence in negotiations signals some level of distributed leverage. Proposing a liability ladder thus sends an important signal from one bargaining party to the other: nobody is going to get exactly what they want here; let's recognize our respective influence, acknowledge the validity of our respective risk positions, and set reasonable expectations. This secondary function of liability laddering thus opens the door for a bargaining relationship built on a mutual understanding of distributed leverage.

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160. WORLD COMMERCE & CONTRACTING, MOST NEGOTIATED TERMS 2022: NEGOTIATING IN A TIME OF TURMOIL 5 fig.1 (2022), https://www.worldcc.com/Portals/IACCM/Resources/11463_0_Most-Negotiated-Terms-2022.pdf [https://perma.cc/SW89-7GZV].

161. *Id.* at 9.

162. Indeed, one might conclude that if deal lawyers prioritize liability limitations, deal lawyers must consider liability limitations to be important. *Cf.* Badawi, de Fontenay & Nyarko, *supra* note 152.

Relatedly, the introduction of liability ladders also signals transactional commitment. As suggested in Part III.C, super caps require concession by both parties; as such, the proposal of a super cap structure signals the proposing party's willingness to concede on key deal points in furtherance of getting the deal done.[163] When and how a liability ladder is proposed, of course, will influence the nature of the signal. If a liability ladder is proposed and negotiated late in the bargaining process, as is often the case,[164] a seller's proposing a super cap structure and a buyer's agreeing to one might be a way for parties to respectively signal that they are ready to close the deal. Alternatively, if a liability ladder is proposed early—even in concept only, as an option for discussion or as bracketed, optional language within a contract template—this might signal transactional commitment from the outset, thus encouraging efficient collaboration and an expedited bargain.[165]

The impact of liability ladders' signaling function extends beyond the contract parties themselves. Internal and external stakeholders, too, such as owners, managers, investors, and potential acquirors, intercept and interpret these signals in meaningful ways. Business teams track risk exposure for purposes of insurance stacking, operational mitigation, and contingency planning,[166] and potential investors and acquirors are laser focused on risk exposure around data security policies—including contracting practices.[167] Practitioners described contractual liability limitation of a target company as important to the diligence and integration phases of an M&A transaction, noting that it is rare to see anomalous contractual liability (e.g., atypical uncapped liabilities or atypically large super caps) receive special treatment in the acquisition agreement itself; instead, contractual liability exposure is considered as part of the larger risk package at the diligence stage, and—if a buyer is comfortable with the deal and proceeds to closing—such exposure is often addressed operationally vis-à-vis contract amendment or replacement post-closing.[168]

While known compliance weaknesses or non-market contracting policies are sometimes handled operationally through post-closing shore-ups and contract replacements, at other times, such issues can materially impact the structure and closing likelihood of an M&A deal. If a prospective acquiror has significant concerns regarding a target's data

163. *See, e.g.*, Zoom Interview with Firm Attorney III (Nov. 29, 2023) (arguing that formulation of super caps may be arbitrary, but upon agreeing to a super cap, "people feel like they've achieved something, and, in a sense, they have" since each party gives something and gets something in order to achieve resolution).

164. *See, e.g.*, *supra* Part III.A.

165. Efficient collaboration relies upon efficient information-sharing, which liability laddering negotiations likewise further. *See, e.g.*, *supra* note 139 and accompanying text.

166. Zoom Interview with In-House Attorney II (Dec. 22, 2023) (explaining that super cap formulations based on dollar amounts, instead of multiples, help streamline exposure measurement for reporting to internal financial teams, and reflecting on stakeholder education more generally, whereby in-house counsel has analogized dollar-based super caps with self-insurance for purposes of explaining their utility).

167. *See, e.g.*, Zoom Interview with Firm Attorney V (Dec. 12, 2023) (describing M&A buyers, in considering the acquisition of SaaS and other cloud computing vendors, as being "all over" data privacy and security issues, including regulatory compliance, contracting policies and procedures, and customer base); Zoom Interview with Firm Attorney VI (Dec. 14, 2023) (describing "intense diligence" around data, compliance, and exposure in M&A transactions where the target company accesses or handles sensitive data); Zoom Interview with In-House Attorney III (Jan. 2, 2024) (describing diligence processes involving detailed contractual analysis, including with respect to caps and super caps, and flagging of caps over a prescribed threshold); Zoom Interview with In-House Attorney V (Jan. 12, 2024) (describing focus on material contracts' limitation of liability provisions as a focus in due diligence for purposes of risk exposure analysis).

168. Zoom Interview with In-House Attorney V (Jan. 12, 2024).

security compliance regime, for example, the acquiror might insist that the deal be structured as an asset purchase, with the most concerning liabilities expressly excluded.[169] Or, the buyer might walk. A secondary function of liability laddering in day-to-day commercial transactions thus has the potential to shift and shape, as part of larger risk management considerations, a vendor's ultimate transaction.

An analogy can be drawn to the widespread impacts of environmental, social, and governance ("ESG") considerations on corporate governance and, in turn, M&A.[170] A target's ESG profile impacts acquisition candidacy, purchase price, and likelihood of closing; i.e., whether and how a deal gets done.[171] This Article has argued that the balance of risk and reward can determine whether and how a commercial deal gets done;[172] writ large, the universe of those commercial deals, as representative of a target's larger risk profile, can—like an ESG profile—determine whether and how an M&A deal gets done.

C. Discussion

This Part has considered the various functions of liability laddering, locating the most meaningful impacts not only in its primary liability-limiting function, but also in its secondary signaling functions, which are critical to stakeholder engagement, growth prospects, and operational success. The value of these secondary functions, which enable diffusion of crucial bargaining messages around leverage distribution, transactional commitment, and risk management, underscores the importance of the prescriptive points made in Parts II.D and III.C, calling for inclusion of liability laddering in early-stage contracting, and further underscores the opportunity for deal lawyers to add value to transactions by signaling commitment and building momentum through contract design.

CONCLUSION

As businesses grapple with high-risk contingencies and policymakers pursue long-term strategies to rebalance risk and incentives in data-related dealmaking, contract designers can take steps to move the needle now. Liability ladders, when utilized appropriately, do much more than set elevated super caps for high-risk concerns; they send critical signals, close efficiency gaps, establish market- and data-driven incentives, and offer opportunities for value creation by deal lawyers. Deals involving data management require thoughtful allocation of risk, both to incentivize vendors to adhere to best practices and to encourage innovation and careful consideration of transactional scope. By reimagining the deal process through early acknowledgment of liability laddering, robust information sharing, and intentional negotiation of integrated provisions on braided tracks, contract designers can

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169. Zoom Interview with Firm Attorney VI (Dec. 14, 2023). An asset purchase may be less desirable for a target company for several reasons, including the burdensome transfer of specified assets, third-party consent requirements, and tax considerations.

170. *See* Afra Afsharipour, *ESG and Board-Shareholder Engagement in M&A*, *in* BOARD-SHAREHOLDER DIALOGUE: POLICY DEBATE, LEGAL CONSTRAINTS AND BEST PRACTICES 297–324 (Luca Enriques & Giovanni Strampelli eds., 2023) (exploring the implications of ESG on M&A dealmaking and observing that "ESG factors are poised to impact both the logic of a deal and the procedural aspects of dealmaking").

171. *Id.*

172. *See, e.g.*, *supra* notes 28–29 and accompanying text.

improve efficiency and business outcomes in furtherance of better, more collaborative dealmaking.

Appendix A: Practitioner Interviews; Methodology

Original practitioner interviews were crucial to this Article, from cataloging descriptive points and industry practices to informing and inspiring prescriptive arguments. While certain commercial agreements are publicly available in final form, as explored more fully in Part II.A, the nuance of negotiations that get contract designers from idea to deal, first draft to final, is not available to the public. Where certain provisions' essential impacts lie not only in their primary surface-level functions, but also in their secondary signaling functions, analysis must delve deeper than the language of the agreed contract. Deal lawyers alone can tell this part of the story.

Twelve transactional attorneys from across the United States, all having significant experience with commercial transactions, were interviewed on a confidential basis for this Article. Interviews were conducted via Zoom, Teams, or by phone on the dates indicated below. Interviewees included private practitioners at technology boutiques, Vault 100 firms, and middle market firms, as well as in-house attorneys. Interviewees are referred to in the body of the Article by use of the defined term set forth below.

Defined Term	**Detail**	**Date of Interview**
Firm Attorney I	Partner at law firm; 10+ years of experience	October 16, 2023
Firm Attorney II	Principal at law firm; 10+ years of experience	October 26, 2023
Firm Attorney III	Principal at law firm; 25+ years of experience	November 29, 2023
Firm Attorney IV	Partner at law firm; 10+ years of experience	December 5, 2023
Firm Attorney V	Partner at law firm; 20+ years of experience	December 12, 2023
Firm Attorney VI	Senior Associate at law firm; 5+ years of experience	December 14, 2023
Firm Attorney VII	Partner at law firm; 15+ years of experience	December 21, 2023
In-House Attorney I	In-house counsel; 20+ years of experience	November 17, 2023
In-House Attorney II	In-house counsel; 5+ years of experience	December 22, 2023
In-House Attorney III	In-house counsel; 15+ years of experience	January 2, 2024
In-House Attorney IV	In-house counsel; 20+ years of experience	January 11, 2024
In-House Attorney V	In-house counsel; 5+ years of experience	January 12, 2024