

**4500**  
**UNFORESEEN CONTINGENCIES. RISK**  
**ALLOCATION IN CONTRACTS**

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**Abstract**

Contracts allocate risks by providing for future contingencies with variable degrees of specificity: they partition future states of the world more or less finely and set obligations for each state in the form of prices, quantity, remedies for breach, and so on. The partitioning may be conditioned on quantitative or qualitative factors. Refined qualitative partitioning based on verifiable outcomes can exploit comparative advantages in precaution-taking and in hedging or diversification. The expected benefit from refined partitioning of remote contingencies may not be worth the contracting costs. In these cases, the court may promote efficient risk-bearing activity by setting the parties' obligations in these states of the world *ex post*, as long as the court's determination in each state is predictable.

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**1. Introduction**

When the occurrence of an unforeseeable event would cause a promisor to bear an unexpectedly large loss in performing her contractual obligation, the parties might renegotiate and modify the promisor's contract. In most cases, the law will enforce their agreement as modified. However, even in default of such adjustment, a set of common law doctrines may offer relief to the promisor. The unexpected loss triggering the relief might be an increase in the cost of performance (out-of-pocket or opportunity cost) or a decrease in the value of the reciprocal obligation of the promisee. The common law doctrines of impossibility and commercial impracticability release the promisor from her obligation on the grounds of an unforeseeable supervening event that increases the cost of either literal performance or damages liability to a level beyond the anticipated range of values at the time of contracting. The doctrine of frustration excuses when the supervening event impairs the 'purpose' of the

agreement: in other words, the value that would be realized from the reciprocal performance of the other party. Mutual mistake about the subject matter of the contract excuses performance when new information comes to light that moves the value of the exchange to either party outside the range mutually anticipated by the parties at the time of contracting. Finally, under the rule in *Hadley v. Baxendale*, a promisor who breaches is released from liability for losses of the promisee that were unforeseeable. Thus, the release of contract obligations under these various common law doctrines hinges not only on whether the parties provided for the risk in their contract, but also on the unforeseeability of the contingency responsible for the threatened unexpected loss. Law and economics scholarship has examined at great length the efficiency of contractual allocations of risk in incomplete contracts. A subset of this literature has struggled with the relevance of unforeseeability in this analysis. This essay provides a review of the significance of the risk of unforeseeable contingencies in commercial contracting and the common law of contracts.

The chapter begins with an outline of the means and ends of risk allocation in contracts and the determinants of a contract's specificity in partitioning future states of the world (in economic terms, the contract's completeness). The contractual allocation of risks has significant efficiency consequences because it sets investment incentives for each party (resource allocation) and exploits differences in their respective risk-bearing capabilities (risk-sharing). Contracts allocate risks in larger or smaller bundles that may be defined qualitatively or quantitatively. The price, quantity or remedy term of a contract may shift to the buyer the risk of cost increases within specified ranges. Or, these terms may be conditioned on outcomes produced by specified causes. Either the quantitative ranges or the qualitative causes may be broadly or narrowly defined (Triantis, 1992). Comparative advantages in precautions or risk-bearing may be exploited more fully when contracts partition future states of the world more finely. However, the higher contracting and verification costs of refined risk allocation may offset the expected benefits. In particular, the more remote the risk, the heavier the discount on the benefit from specific allocation and the less likely is a net benefit from specific treatment of risks. Most law and economics scholars treat the risk of unforeseeable contingencies as the limiting instance of remote risks: by definition, the cost of specifying *ex ante* the contractual obligations in the unforeseeable state of the world exceeds the expected benefit. Indeed, modern doctrinal statements of the excuses of frustration, impossibility and impracticability reflect this approach by referring to 'the occurrence of an event [or contingency] the non-occurrence of which was a basic assumption on which the contract was made', which seems to encompass those risks to which the parties attached a probability of near zero (Restatement (Second) of Contracts §§261, 265; Uniform Commercial Code §615). In these cases, the courts may promote efficient risk-bearing activity by setting the parties'

obligations *ex post*, particularly if their determination is conditioned on verifiable outcomes and predictable.

## 2. Contract Partitions and Incompleteness

Parties enter into executory contracts instead of present exchanges for two principal reasons: (1) to protect and thereby encourage relationship specific (or reliance) investments which increase the value of their exchange and (2) to transfer risks and thereby to exploit comparative advantages in risk-bearing. Accordingly, a distinction may be drawn between two types of contracts that define opposite ends of a spectrum: (1) exchanges of goods and services for which close substitutes are readily available in thick markets ('market' contracts) and (2) exchanges for which there are no such substitutes because of specific investments made by either or both parties before the exchange is complete ('off-market' contracts). By definition, the investment of a party to a market contract is not specific to the relationship; the availability of market substitutes protects the investing party from opportunism (Klein, Crawford and Alchian 1978; Williamson 1979). The gain from executory market contracts derives from the allocation of market risks, not the actual delivery of goods or services or the protection of reliance investments. The parties contract to exploit comparative advantages in risk-bearing that are due to differences in their respective degrees of risk aversion and in their ability to hedge or shift risks in their other contracts and activities.

In contrast, off-market executory contracts both protect specific investments and allocate risks associated with uncertainty in the environment and the imperfect information of the parties. The allocation of risks in these contracts has a significant impact on various important investment decisions: the parties' investment in information prior to contracting, the promisor's decision to perform or breach, the promisee's specific (reliance) investments, and either party's precautions against the probability and impact of adverse risks that threaten the value of the exchange. Because of its impact on resource allocation, the task of allocating risks in off-market contracts is more complex than in market contracts. Enforcement of off-market contracts is also more difficult because of the obstacle of verification: the cost of proving breach and damages to a third-party enforcer, typically a court. Thus, each party has a greater temptation to avoid performing obligations that threaten to inflict large losses. Consequently, the parties may wish to dampen incentives to chisel by sharing risks more evenly under the contract and thereby reducing the variance in the returns of each party (Goldberg, 1985). Without attempting to describe fully the various tensions that exist among the objectives of risk allocation, this essay reviews contract terms, such as price and remedies, that partition the

future according to qualitative or quantitative factors. This review sets the stage for a discussion of how foreseeability is relevant in the common law of contracts.

Consider the following sales contract. Seller agrees to manufacture and deliver a specific good to Buyer one year later. Buyer maximizes the value of the good to him at delivery ( $V$ ) by making a reliance investment of  $R$ . The cost to Seller of making and delivering the good is  $C$ . To keep the discussion simple, assume that Seller has no other use for the good, no third party would bid for the good and the exchange has no external effect on third parties. Therefore, the social gain (or loss) from the completed exchange is the difference:  $V - R - C$ . The parties contract under uncertainty and with imperfect information about the state of the world that will materialize at the time of delivery.  $V$  and  $C$  are stochastic and their respective distributions are neither perfectly positively nor perfectly negatively correlated. The latter assumption allows the parties to have conflicting interests with respect to the decision to terminate their contract. At the time of contracting, Seller and Buyer observe the same joint distribution of  $V$  and  $C$ , although the actual values at the time of contracting is private information. The terms of the contract divide the gain (or loss) from the exchange ( $V - R - C$ ) between Buyer and Seller and the parties may decide to condition the division on the state of the world existing at delivery.

A complete contingent contract would specify the parties' obligations in each possible state of the world and the division of the gain (or loss) from the contract in each state. An efficient complete contingent contract sets optimal investment incentives and sharing of risks over each state of the world. Each state can be defined in both quantitative and qualitative terms: by the realized values of  $V$  and  $C$  and the factors that produced  $V$  and  $C$ . The motivating premise for contracts law and economics scholarship is that contracting and verification costs make complete contingent contracts infeasible. Shavell states that incompleteness is efficient to the extent that the bargaining costs are high to provide for that contingency, the contingency has a low probability of occurring, the cost of verifying its occurrence is high and the cost of settling disputes is low in the event that the contract does not provide for the contingency (Shavell, 1984). In practice, contracts are incomplete because they group states of the world into more broadly framed partitions (Schwartz, 1992). In the sales contract described above, for example, the terms governing price, quantity and remedy for breach would typically establish the rights and obligations of the parties according to more or less broadly framed quantitative states of the world. At one extreme, for example, if the contract has fixed price and quantity, and is specifically enforced, the contract does not distinguish between different outcomes: each party's obligation is the same regardless of the realized state.

### 3. Quantitative Partitions: Price and Remedy

#### 3.1 Price

To isolate the comparison among fixed and flexible price terms, assume for the moment that contracts are specifically enforced. On the one hand, a fixed price provides a certain revenue to the seller and a certain contractual obligation to the buyer. On the other hand, a flexible price can provide a hedge against fluctuations in the seller's cost of performance or the buyer's valuation of performance. As a general matter, the contract price may offset risks created by other contracts and activities of either party. This point is demonstrated by Polinsky in his comparison of fixed and spot prices in market contracts (Polinsky, 1987). To the extent that fluctuations in spot prices reflect changes in cost conditions in the industry that are experienced by the seller, a spot price contract reduces the risk of the seller (and shifts cost risk onto buyer). Conversely, to the extent that spot price fluctuations are driven by demand-side conditions that reflect changes in the value of the good to buyers, a spot price transfers the risk of such value fluctuations to the seller. Thus, Polinsky says:

a spot price contract will ... tend to insure the seller against production cost uncertainty...although the upward slope of the industry supply curve and the less than perfect correlation between the seller's costs and shifts in the industry supply curve reduces the value of a spot price contract as insurance against production cost uncertainty... A fixed price contract would insure the seller against... demand side uncertainties [that cause shifts in the industry demand curve]...A spot price contract will tend to insure the buyer against valuation uncertainty, while a fixed price contract will insure the buyer against supply side uncertainties. (Polinsky, 1987, p. 29)

Spot price contracts condition only on the revealed spot market price at the time scheduled for delivery. Other distinctions among states of the world existing at that time - such as idiosyncratic increases in seller's costs - are ignored either because there are no benefits to such further partitioning or because the contracting and verification costs of doing so outweigh the benefits.

In the absence of a spot market for a close substitute or in cases where the spot price provides a poor fit because of idiosyncracies of the seller or buyer, other flexible price terms may be more closely tailored to the conditions of the seller or buyer to achieve the desired allocation of risk. For example, the price may be adjusted by reference to the realized values or determinants of C and V (for example cost plus or royalty contracts) or to accessible indices correlated with the cost or value of performance (Joskow, 1988). Alternatively, the contract may provide that a price must be reset upon the occurrence of certain

contingencies (Joskow, 1988). Each alternative has its own shortcomings. Realized values of  $C$  and  $V$  are often private information and not observable or verifiable. In longer term contracts, indices can fall out of line with  $C$  or  $V$  as easily as spot market prices. Yet, the renegotiation of off-market contracts raise the prospect of opportunistic appropriation of quasi-rents (Williamson, 1979).

### 3.2 Remedies

The effect of the standard breach of contract remedies on investment incentives is well known. Under assumptions of perfect enforcement (including no insolvency risk) and no renegotiation, expectation damages set socially efficient performance incentives for the promisor, while reliance and restitution measures lead to moral hazard and excessive breach by the promisor. Specific performance produces insufficient breach. Expectation and reliance damages encourage too much reliance expenditure by the promisee (Shavell, 1980). Although the mitigation rule requires the promisee to take all reasonable loss avoiding measures after the breach occurs, information about the reasonableness of the promisee's actions is difficult to verify. In contrast, restitutionary damages or no recovery (under a doctrine of excuse, for instance) are superior in inducing efficient amounts of reliance and mitigation by the promisee (Bruce, 1982; Goldberg, 1988). Thus, when the promisor's liability cannot be conditioned on efficient investment levels on the part of each party because of contracting and verification costs, there is a tension between the goals of setting the correct incentives for the promisor and for the promisee. The next paragraph describes a further complication that arises when one or both of the contracting parties are averse to bearing risks.

Breach of contract remedies allocate the risk of fluctuations in  $C$  and  $V$ . For example, suppose the contract has a fixed price that is paid in advance and consider the risk borne by the seller. If the contract is specifically enforced, then the seller bears the risk of fluctuations in  $C$ . If the sanction for breach is the payment of damages, the measure of damages ( $D$ ) serves to divide the risks between the parties. For any given level of  $V$ , the seller bears the risk of cost fluctuations in the range  $C < D$ ; the buyer risks losing  $V - D$  if  $C > D$ . Unless damages are punitive, neither party bears the risk of  $C > V$ ; this is the range of efficient breach. Fluctuations in  $V$  matter to the seller if damages are a function of  $V$  (for example, under the expectation measure): the seller bears the risk of  $V$  when the cost of performance is greater than the fixed price. The correlation between  $C$  and  $V$  therefore is also significant to the seller. For example, if  $C$  and  $V$  are negatively correlated, a rise in  $C$  and fall in  $V$  may induce the buyer to repudiate the contract and thereby release the seller from her obligation. Thus, the standard breach of contract remedies divide the joint distribution of  $C$  and  $V$  and thereby establish incentives for breach, reliance, and investment in precautions against adverse changes in  $C$  or  $V$ . They can also exploit

differences in the risk preferences of the parties. For example, a seller insures the buyer against the risk of cost increases under remedies of specific performance and expectation damages, which is an efficient risk-sharing arrangement if the seller is risk-neutral and the buyer is risk averse and does not hold a hedge against that risk (Polinsky, 1983; Shavell, 1984).

If the remedy is conditioned on  $C$  and  $V$  (or their proxies), significant tradeoffs exist between the goals of efficient investment incentives and optimal risk-sharing. If the seller is risk averse, the measures of damages that optimize the sharing of cost risk create a moral hazard of underperformance by the seller. Of course, in other cases, only one of the performance or risk-sharing goals are relevant: for example, if the seller is risk-neutral (expectation damages are efficient) or if the seller is risk averse but has no control over the cost of performance (some measure less than expectation is efficient, depending on the buyer's risk aversion). White suggests that discharge under an excuse doctrine should be analyzed under a unified approach as a breach sanctioned by damages equal to zero. She demonstrates that zero damages produce optimal risk-sharing only in very exceptional circumstances and always encourage excessive breach (White, 1988). However, the advantage of discharge comes from the effect on the buyer's investment incentives, particularly reliance and precaution expenditures, which she removes from her analysis (Bruce, 1982; Goldberg, 1988). The role of these incentives becomes more salient when the allocation of risk by cause is discussed in Section 4.

Even if a contract addresses risks only in quantitative terms, it might condition the remedy (as opposed to the calculation of damages) on the realized value of  $C$ . Instead of one measure of damages (for example expectation), the contract might provide for two measures depending on whether the cost of production falls within one region or another of the distribution. For example, if breach occurs when  $C < \min(C', V)$  then the promisor pays expectation damages; if breach occurs when  $C > C' > V$ , then the promisor's obligation is discharged. Even though optimal risk-sharing is the only objective (because  $C' > V$ ), it is not clear that this partitioning of future states creates a superior risk-sharing arrangement, even if the seller is risk averse and the buyer is risk-neutral. Even a risk-neutral buyer will offer to pay a lower price for the good when he faces the prospect of undercompensation in the event of breach. Therefore, in the region of the distribution of  $C$  when the seller is not excused, expectation damages will be larger than under a regime of single damages measure. This increases the variance of returns for the seller in that region, while decreasing it within the region of discharge. One would require more information about the seller's utility function to know whether she would prefer this risk profile (Sykes, 1990).

The theoretical discussion of the incentive and risk-sharing effects of remedies usually assumes perfect enforcement. If this assumption is relaxed, the benefits of the various remedies are compromised. The parties may set payment

terms to achieve the allocation of risks that would be achieved by price and remedies in perfect enforcement. A payment or performance schedule allows either party to walk away from the contract at any point in time with a roughly adequate allocation of gains and losses. For example, Goldberg suggests that 'there are a large number of reasons why a particular contract might not be completed and one way to protect one's interests is to assure that at each point in time, the performance rendered and compensation received are not too far out of whack' (Goldberg, 1988, pp. 113-114). Kull makes a similar point in discussing cases decided under the doctrine of frustration. Under the contract in *Fibrosa S.A. v. Fairbairn Lawson Combe Barbour*, the buyer promised to pay one-third of the price of textile machinery with its order and the balance against shipping documents. Kull suggests that the parties intended to allocate the risk of loss caused by the frustrating event (the German invasion of Poland) by allowing the seller to keep one-third of the price in the event of the buyer's breach. This is a reasonable interpretation of the intention of parties who opt for a self-enforcing contract by letting losses lie where they fall. Indeed, a contract might assign the entire risk of the contract to the buyer by requiring full payment in advance or to the seller by providing for payment only upon delivery (Kull, 1991). White demonstrates that advance payments are efficient where negative damages (from buyer to breaching seller) are optimal because of the seller's risk aversion, but the parties believe that a court would be more likely to allow the breaching seller to retain a deposit than to order negative damages (White, 1988).

#### **4. Qualitative Partitioning of Remedies**

In the foregoing discussion, the obligations of the parties and the sharing of the returns from the exchange are conditioned on the realized values of  $V$  and  $C$ , or their respective quantitative proxies. In deciding how finely to partition the joint distribution of these variables, the parties weigh the benefit of more tailored risk allocation against the correspondingly higher costs of contracting and verification. The other dimension over which the parties may contract is qualitative: the cause of fluctuations in the cost and value of performance. Qualitative partitioning may be preferred because of the enhanced efficiency of risk allocation by cause or the lower contracting and verification costs. Force majeure clauses release the promisor upon the occurrence of specified events that impair the value of her contract. Common law doctrines of excuse are triggered when an unforeseeable event occurs that causes performance to be impossible or commercially impracticable, or that frustrates the value of the reciprocal performance. The discussion in this part focuses on the contractual specification of risk by cause and the next part addresses the judicial treatment of unspecified remote risks through the doctrines of excuse.

#### 4.1 Precautions

Suppose that contingency  $x$  and contingency  $y$  can each cause the same increase in the cost of performance and have the same probability of occurring at the time of the contract. What reasons might justify allocating the risk of  $x$  to the seller (for example specific enforcement or expectation damages) and the risk of  $y$  to the buyer (for example excuse or remedy of restitution)? The cause of the increase in cost does not affect the optimal performance/breach decision or the efficient level of reliance. It is, however, relevant to efficient precautions and risk-sharing. Posner and Rosenfield set the framework for the analysis of efficient risk allocation in their influential article on the common law doctrines of excuse. The superior risk bearer is the party who is in the best position to accomplish the following measures: to minimize the probability of the adverse contingency, to minimize the extent of the loss to the promisee resulting from nonperformance either before it occurs (precaution) or after (mitigation), or to insure (by self or with third parties) against the residual risk of the loss that cannot be feasibly avoided (Posner and Rosenfield, 1977). The relative ability of each party to bear or insure against the residual risk is significantly more difficult to determine than the comparative advantage in taking precautions against the risk, and so we set aside the former for the moment.

Comparative advantages in the taking of precautions are related almost by definition to the cause of the threatened loss from an increase in cost or decrease in the value of the contract. The question is not only whether it is feasible to partition by cause, but how specifically to do so. A cost increase may be due to a natural disaster (general cause), which may be a tornado, earthquake, flood or drought (specific cause). To the extent that the risk is endogenous, there may be benefits to specific allocation because it sharpens the assignment of responsibility for precautions. Irrigation systems are effective precautions against droughts, but not tornadoes.

Of course, obligations may be conditioned not on the contingency but directly on the precautionary actions of the parties. For example, damages liability of the breaching promisor may be conditioned on the reasonableness of the actions of the parties under the circumstances (Shavell, 1980). This approach is significantly less common in contracts than torts (Cooter, 1985; Cohen, 1994). Contracting parties might condition damages liability on the failure of the seller to take reasonable precautions against cost increases and the reasonable precautions of the buyer (including efficient level of reliance). However, as noted earlier, contracts are rarely written in these terms because reasonable behavior is typically based on unverifiable information - particularly because the *ex ante* probability of breach is difficult to prove *ex post* at trial. The cost of verifying information concerning actions before breach or repudiation explains why contracts condition on contingencies rather than the actions of the parties. The mitigation requirement in contract law does limit the

recovery of the promisee to the loss that could not be avoided by reasonable measures taken only after the promisee learns of the promisor's repudiation or breach. Although verification problems undermine the effectiveness of the mitigation rule in this regard, at least the assessment of the *ex ante* probability of breach is not a factor. There is some evidence that judges may choose between expectation and reliance measures of damages based on their assessment of the reasonableness of the conduct of the promisor and promisee in any given case (Cohen, 1994). However, complete discharge of obligations under the doctrines of excuse is conditioned on the occurrence of events, rather than the actions of the parties (as long as the event in question was not due to the fault of the promisor).

#### *4.2 Residual Risk*

Posner and Rosenfield suggest that the ability to bear residual risk (after all cost effective precautions are taken) is a function of cost of appraising the risk, the transaction cost of obtaining third party insurance and the degree of risk aversion. As noted above, a party might also self-insure by hedging its risk under the contract against other contracts and activities. Corporate parties often have elaborate webs of commercial and financing contracts that spread and transfer the risks of their activities. Indeed, the rules of debtor-creditor relations provide important risk allocations that should be integrated into the discussion of risk-sharing in commercial contracts. If the cost of performance rises to a level such that the seller cannot perform, she breaches and becomes liable for damages. However, if the seller becomes insolvent as a result, the buyer will recover only a fraction of these damages. Even in the case where expectation damages are awarded, the buyer bears the risk of a cost increase that threatens its seller's solvency and shares this risk with other unsecured creditors of the seller (Triantis, 1992; Trebilcock, 1994). Thus, the ability to take precautions against a given risk is likely to be of greater significance than the ability to bear residual risk in the identification of the superior risk bearer in a contract. In addition, one party may be in a better position to hedge specifically the risk of a dramatic increase in the cost of performance that hinges on a specific cause. If, for example, the cause is an exogenous increase in fuel cost and the buyer of the good owns oil fields or shares in oil companies, the buyer may be the superior risk bearer even if risk averse (Triantis, 1992).

The contingency itself may inflict a loss on the seller beyond the liability for contract breach. For example, suppose the seller is a farmer who contracts to deliver crops grown on his land for a fixed price. A natural disaster - flooding - destroys those crops. At the same time, the market price for the crops has increased substantially since the time of contracting as a result of the disaster. If the seller is not excused, she bears two losses: the loss of crops and the liability resulting from the increase in the market price of the crops. If the seller is risk averse, it may be efficient to pass on the second loss to another party,

such as the buyer. The parties may signal that they intend this result when they provide for the sale of crops grown on a particular tract of land (Posner and Rosenfield, 1977; Sykes, 1998). Another instance of this approach is the rule that the destruction of identified goods prior to delivery, without fault of either party, discharges contractual obligations (U.C.C. 2-613; *Taylor v. Caldwell*, where lease of a music hall was rendered impossible because destroyed by fire). In theory, the point may be generalized to any case in which the promisor makes a substantial specific investment toward performance that is lost when she is compelled by circumstances to breach. If the promisee has incurred less significant reliance costs, excuse might provide a more even sharing of the losses caused by the occurrence of the contingency. The reason that excuse is not generally available in these cases may be that a promisor's wasted investment is less verifiable than the physical destruction of an asset (for example lost crops or identified goods).

In some cases, the superior risk bearer is easy to identify. For example, the risk of a cost increase from a given cause should shift to the buyer if the seller cannot affect its probability or the loss suffered by the buyer as a result of nonperformance, if the buyer has at least as good information about the probability and magnitude of loss as the seller and if the buyer is risk-neutral or can hedge the risk of loss against its risk exposure from other activities. As several commentators have noted, however, the various factors determining risk-bearing advantage may well point to different parties and the task of determining the superior risk bearer overall may be very complicated (White, 1988; Trebilcock, 1988). This reflects similar tensions discussed above with respect to the choice of remedies for breach, but complicated here because of the focus on specific causes and effects.

### 5. Judicial (*ex post*) Partitioning

The discussion describes loosely the complex task of risk allocation in commercial contracts. An important part of it is deciding how to partition future states of the world. As Sykes demonstrated in the case of a regime of excuse conditioned on  $C > C'$  (see above), the benefits from fine partitions of quantitative outcomes in contracts are questionable and therefore the unforeseeability of the tails of the relevant distributions is not likely to be a concern. On the other hand, when a contract partitions according to the qualitative cause of contingencies, the remoteness of the contingency matters. The benefit of dealing with the specific cause must be discounted by its low probability. In addition, by definition, the parties have less experience with low probability events and therefore information is more costly. As a result, the

benefit of addressing a remote risk may not be worth its cost (Gillette, 1985, 1990). At the same time, however, some causes tend to be more verifiable than the realized quantitative measures of cost or value of performance. All other things equal, it is less feasible for the parties to incur the cost of allocating remote risks specifically. They therefore would bundle them in more broadly framed risks, in much the same manner as travellers budget unexpected incidentals without identifying them specifically (Gillette, 1985; Triantis, 1992).

As uncertainty resolves during the term of the contract and remote risks become more likely or materialize, the benefit from more specific allocation becomes correspondingly greater in order to reduce or avoid the risk in the most cost-effective manner. Recontracting in light of the new information is likely to be impeded by transaction costs and strategic behavior. The common law, industry custom or contract provisions (for example gross inequities provision requiring renegotiation in good faith) may address these obstacles by imposing duties on both parties to cooperate in adjusting the terms of their bargain. There is some debate about the extent to which the law should require cooperative adjustment to preserve the value of the exchange (Gillette, 1990; Scott, 1990). Moreover, if a dispute should arise at a later date, a court will be presented with the difficult task of distinguishing between efficient modifications and those obtained by strategic behavior (Aivazian, Trebilcock and Penny, 1984). However, the issue of consensual adjustment of contracts is covered elsewhere in the encyclopedia.

Posner and Rosenfield suggest that the courts can complete the contract with respect to those remote risks the parties could not foresee at the time of contracting, according to the principles of efficient risk allocation (Posner and Rosenfield, 1977). The benefit of specific allocation may be reproduced if a court later allocates *ex post* the once-remote risk, but only if the ruling is predictable. The judicial allocation of losses cannot yield the intended efficiency benefits of efficient precaution and insurance unless it can be predicted *ex ante* (Kull, 1991; Triantis, 1992). As discussed above, the superior risk bearer analysis must play with sets of criteria that often cut in opposite directions and call for information that is often unverifiable. (Trebilcock, 1988; Schwartz, 1992). As a result, parties may well contract *ex ante* to avoid the additional risk of judicial intervention or may overinvest in precautions. (Triantis, 1992; Trebilcock, 1994). In an important recent article, Schwartz argues that common law excuse rules conditioned on unobservable or unverifiable information will be unusable by courts and rejected by future contracting parties (Schwartz, 1992). The concern with conditioning judicial allocation of risk on verifiable factors, in particular, seems to be a persuasive explanation for the greater inclination of the courts to excuse performance in cases where it has become impossible (for example by the destruction of the subject matter or because of government regulation) rather than impracticable. (Schwartz, 1992). As a normative matter, the courts should intervene to

allocate remote risks when the incompleteness of the contract is due only to contracting costs, and not to obstacles of verification.

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