



CONSTRUCTION INDUSTRY INSTITUTE®

EQUITABLE RISK ALLOCATION

Construction Industry Institute

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Equitable Risk Allocation

**Prepared by
The Construction Industry Institute
Contracting to Appropriately Allocate Risk Research Team**

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Executive Summary

Many industry participants allocate construction risks by the process of aversion. Owners have a tendency to shift risk to the primary contractor, who in turn pushes risk to the lower-tier parties in the contracting arrangement. As a consequence, parties with the least amount of control and influence over many of the risk-producing factors and decisions often carry the majority of the construction risk burden.

Adding to the problem, the construction industry has yet to accept a conclusive and widely accepted practice. Many feel that prevailing risk allocation strategies are ineffective and detrimental to overall project success. New research by the Construction Industry Institute (CII), however, encourages risk allocation in a compromising and educated manner, recognizing the unique circumstances of each specific project.

In 2004, CII formed the Contracting to Appropriately Allocate Risk Research Team. Composed of a wide representation of industry players, the research team reached several conclusions during its investigation. First, the industry has much to learn concerning appropriate risk allocation. Secondly, it is not appropriate or logical to specify that a particular risk should be allocated a certain way for any and every project. Lastly, inappropriate risk allocation may lead to increased costs for both owners and contractors.

The research team developed the “Two-Party Risk Assessment and Allocation Model” that encourages contracting parties to compromise during the risk allocation process. It is designed to assess and allocate risk before project execution so that risk management efforts are minimized.

The research and the model are described in the following pages. The model is important because it facilitates involvement from any two contracting parties early in a project and helps in appropriately allocating each particular risk to the party that is best equipped to handle it.

Introduction

Risk is a reality that every contracting party faces on a daily basis. Construction companies often realize risk at an elevated level due to the nature of the business. Construction involves numerous contracting parties, technological challenges, and difficult working conditions. As a result, allocation of risk in the construction industry is often a controversial process with each party attempting to avoid as much risk as possible.

Problem Statement

Currently, a widely accepted risk allocation model does not exist in the construction industry. Risks are often allocated based on historical company practices. These methods become common practice since they are easy to implement and appear to eliminate risk for the party with the majority of the bargaining power. However, a continual shifting of risks can lead to controversial contracting relationships and result in severe financial consequences if the risks are not assumed and controlled by the appropriate parties.

Attempting to protect the party with the higher bargaining power, one-sided onerous contracts often achieve the exact opposite. A contract that shifts risk inappropriately will frequently lead to a reduction in the quality of bidders as the more sophisticated parties will not be willing to adhere to the contract. A bidder that does not recognize the inequitable contract terms may submit a contract bid price that does not reflect the inflated amount of risk. Whether the successful bidder is unqualified or bids too low, the probability exists that litigation and disputes may arise later in the project. If an unqualified or low bidder becomes insolvent, the owner will be left to deal with the financial consequences that it was trying to avoid when drafting the one-sided contract.

A lack of education and overall understanding of the consequences of inappropriate risk allocation encourages contracting parties to continue their destructive risk shifting. The common practice of shifting risk to the contracting party with the least amount of bargaining power is recognized as “inappropriate risk allocation,” which can be defined as:

The practice of allocating risk without separately considering which party may be in the optimum position to evaluate, control, bear the cost, or benefit from the assumption of the risk.

Appropriate risk allocation can only be accomplished when these considerations, along with others, are evaluated for each contracting party. Inappropriate risk allocation is most commonly accomplished through direct contract language. Even when risk is properly allocated, bad business or poor performance practices may still create financial distress.

Bad business and poor performance risk are not typically allocated via direct contract language, but instead simply exist due to the nature of the business. Some risks are best dealt with through direct contract language, while other risks are best dealt with through project execution and performance. However, even though there is not a specific contract clause dedicated to these types of risks, all contracting parties should strive to draft contracts that will provide mitigation to resolve all risks.

A common example of inappropriate risk allocation is a no damages for delay clause that allows the contractor time relief as the sole remedy to an owner-caused delay. In this situation, the contractor cannot recover any other damages associated with the delay, even though the delay was out of the contractor’s control. Another example of inappropriate risk allocation is a design-bid-build contract that states if the subcontractor fails to review the plans and notify the general contractor of any design errors prior to construction, then it is the subcontractor’s responsibility to provide for the cost to correct the design errors.

Unfortunately, inappropriate risk allocation is not limited to privatized, in-house contracts. The research team examined American General Contractors (AGC), American Institute of Architects (AIA), Federal Acquisition Regulations (FAR), and the National Society of Professional Engineers (NSPE) standardized contracts and found many examples of inappropriate allocation. For example, AIA (A201-1997) clauses 4.3.7.2 and 8.3.1 shift the risk of force majeure events to the contractor. Clause 8.3.1 gives the architect supreme control over awarding extra time “for such reasonable time as the Architect may determine.” The relief offered to the contractor is extra time only, and the architect’s decisions may tend to favor the owner. Clause 4.3.7.2 states that claims relating to abnormal weather conditions must be “documented by data substantiating that weather conditions were abnormal for the period of time, could not have been reasonably anticipated and had an adverse effect on the schedule construction.” This can make force majeure claims related to weather difficult for the contractor to prove.

Contractors and subcontractors often enter into contracts containing inappropriate risk allocation because they are in need of work and do not possess the bargaining power to achieve agreeable allocation. As a result, the owners and contractors with the higher bargaining power often draft contract documents in their favor from the outset of the project to minimize risk exposure.

Inappropriate risk allocation has led to adversarial relationships between contracting parties and has thereby increased the frequencies of claims and disputes. Alleviation of the problem requires that each risk on a project be identified prior to construction and be allocated with separate consideration given to the party that may be in the optimum position to evaluate, control, bear the cost, or benefit from the assumption of the risk, recognizing the unique circumstances of the project. With this solution in mind, the research team began its collection of research data.

Data Collection

Literature Review

Previous CII research has made substantial efforts toward establishing widely accepted risk assessment and allocation procedures. *International Project Risk Assessment* (CII Implementation Resource 181-2, 2003) established a systematic method for an individual project participant to assess and manage its risks on an international project endeavor. However, the IPRA is intended to aid an individual international company and does not provide a reference for achieving optimum contractual risk allocation between both contracting parties.

“The Impact of Risk Allocation and Equity in Construction Contracts” (CII Source Document 44, 1989) effectively identified contractors’ and owners’ views and attitudes toward four commonly disputed construction clauses: indemnification, consequential damages, differing site conditions, and delay. This study analyzed the attitudes toward each clause to determine which was viewed as the most equitable. The study provided exhaustive legal research on the four respective risks and made great strides towards educating the industry, but did not establish a framework that contracting parties could use together to assess and allocate risks on each project.

Data Collection Purposes

The data collection purposes were three-fold: to validate that inappropriate risk allocation results in financial consequences, to establish a list of risks most frequently allocated in an inappropriate manner, and to find data to support a constant, optimum allocation of these top risks. The research team established a framework for data collection that would involve numerous evolving phases since the data collection objectives could not be effectively captured with one survey. In the end, the second data collection purpose was not fully achieved as

the research team concluded that optimum allocation of particular risks would never be constant; rather, optimum allocation is project-specific.

Initial Questionnaire

After an initial brainstorming session, the research team developed a questionnaire. Participants were asked to list the five risks that, in their opinion, are most frequently allocated in an inappropriate manner. This questionnaire was an attempt to gain a general insight into the risks most commonly allocated in an inappropriate manner within the construction industry.

Web-Based Survey

In the next step of data collection, the research team drafted a web-based survey. In addition to various organizational characteristics, participants were asked questions regarding the frequency and severity of a list of “top” risks established by the research team after the initial questionnaire. This survey was an attempt to establish the perceived frequency and severity of risks commonly allocated in an inappropriate manner.

Phone Interviews

From the web-based survey, the research team was able to begin to better determine which risks were seen as the primary “hot-button” risks by the industry as a whole in terms of frequency. The team then focused on a smaller sample size of these risks to determine the severity of inappropriate allocation. A phone interview process was undertaken to investigate the specific financial impacts of inappropriate allocation of risk.

Interviewees consisted of individuals who had participated in the web-based survey along with additional research team contacts. The team conducted approximately 60 phone interviews. The purpose of each interview was to discuss several project case studies where risk was inappropriately allocated in the contract and a direct financial impact resulted. However, the majority of the project case studies were examples where bad business or poor performance practices manifested

themselves instead of inappropriate contractual risk allocation directly resulting in negative financial impact. This further demonstrated the lack of knowledge surrounding the issue of risk allocation in construction contracts.

The research team isolated 17 case studies where an actual inappropriate risk allocation resulted in a direct financial impact. The case studies were collected from 12 contractors and five owners. All of the case studies illustrated situations where risk was primarily inappropriately allocated to the contractor. However, the financial consequences were absorbed by both owners and contractors. It should be noted that a contractor increase in contingency was viewed as a financial impact to the owner since the owner would receive the contingency in the inflated bid price.

The cumulative estimated construction budget of all 17 project case studies came to just under \$1.2 billion. The cumulative financial impact from inappropriate allocation of risk in all of the case studies totaled approximately \$159 million, or 14 percent of the cumulative estimated construction budget. Figure 1 represents the overall percentage breakdown of the total \$159 million impact.

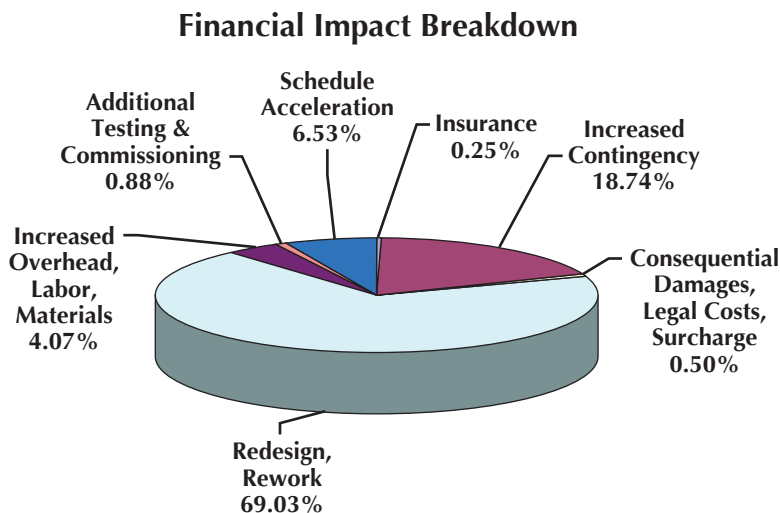


Figure 1. Percentage Breakdown of the Financial Impact of the 17 Case Studies

The redesign and rework impacts made up the majority of the \$159 million impact. These impacts resulted largely from two case studies that involved ambiguous acceptance criteria that required significant redesign and rework before the intended acceptance criteria were satisfied. The majority of these redesign and rework costs were absorbed by the owner. The second largest component of the \$159 million impact came in the form of increased contingencies totaling \$29.8 million.

The phone interview data show that if risk is inappropriately allocated, financial consequences can result as a direct impact. Nearly 20 percent of the overall impact resulted from contractors increasing their contingencies in response to inappropriate risk shifting by the owner. This indicates that if risk is inappropriately allocated to contractors, increased contingencies will often be passed to the owner. It may be more cost-efficient to retain the risk and use mitigation and management techniques to lower the costs in-house.

Research Findings

After the research team collected its data it was clear that inappropriate risk allocation was an industry-wide issue that needed immediate attention. With this in mind, the research team sought out its numerous research findings

Risk Allocation Principles

The research team developed a list of risk allocation principles that will help negotiating parties decide which party should assume each particular risk. These principles will get both contracting parties to consider the most important risk allocation concepts and ideas that the research team believes have the most potential to be overlooked or disregarded. The principles are divided into two separate categories: (1) general risk allocation principles and (2) legal risk allocation principles.

General Risk Allocation Principles

- Many risks cannot be entirely eliminated, but can be controlled.
- Eliminating one risk may cause new risks to materialize.
- Many risks are interdependent so it is important to evaluate risk dependencies to be able to predict the cumulative impact or “domino effect” that may materialize with the realization of one individual risk.
- “Lessons learned” from inappropriate risk allocation should be meticulously documented.
- The optimum allocation of many risks may involve shared responsibility.
- Ignoring a risk will not eliminate its potential costs. If a risk is not contractually allocated, it will be assumed, knowingly or unknowingly, by one or both of the contracting parties.
- The optimum allocation of any particular risk may change from project to project depending on the unique circumstances of the project.

- Any particular party ought to be able to assume a risk if that party: (1) understands the risk, and (2) an adequate reward exists for the assumption.
 - Adequate reward may come in the form of a risk/reward contractual arrangement or as a high probability for increased profit from the assumption of the risk.
- If the damages of a risk allocated to the contractor are foreseeable, the contractor has the responsibility to account for the risk in the bid price.
- Consideration should be given to the fact that in some cases it may be fiscally efficient for some owners to reallocate common risks between the parties upfront in exchange for a higher bid price or a contractual reward scheme.
- Both parties should always consider the ability of the risk-bearing party (including insurance companies) to survive the materialization of the risk.
- Owners should realize that shifting risk will often increase the contractor's price, and should determine whether such risks could be more cost-effectively accounted for with owner retention.
- The maximum possible loss for each risk should not be overlooked or confused with the maximum probable loss.
- Parties should determine the potential for profit that each risk may or may not possess.
- To facilitate a non-controversial contractual relationship, contracting parties should strive for harmony among all contract clauses; for example, an owner should not attempt to include a no damages for delay clause in conjunction with a liquidated damages clause.

Legal Risk Allocation Principles

- Courts will construe provisions exactly as they are written (unless they are against public policy or statute). – *Stricti Juris*
- Courts will only construe a contract provision in a manner that will do substantial justice to the parties. – *Strictisimus Juris*