



Construction Industry Institute®

Allocation of Insurance-Related Risks and Costs on Construction Projects

The purpose of this publication is to make available to industry the results of research conducted by the Construction Industry Institute (CII). The publication does not necessarily represent the views of CII member companies, but is offered as a contribution to the industry.

CII was founded in 1983 to improve the cost effectiveness of the nation's largest industry. The members, who represent a broad cross-section of owners and contractors, believe that many of the problems that limit cost effectiveness are common ones, and that real improvements can be best accomplished in a cooperative environment with the benefits being shared by the construction industry at large.

CII uses the acronym TOPICS to describe the research effort. TOPICS signifies the six research thrust areas: Technology, Organization, People, Information, Controls, and Sigma (meaning others). The task forces for each area are listed below.

Technology

- Advanced Technological Systems
- Computer Integrated Design & Construction
- Design for Safety
- Environmental Remediation Technology
- Modularization
- Technology Strategy

Organization

- Partnering II
- Project Change Management
- Project Organization II
- Pre-Project Planning
- Project Team Building
- Project Team Communications

People

- ADA Impacts
- Continuing Supervisory Education
- Zero Accidents

Information

- 3D CAD Link
- International Construction
- Owner Engineering Organization

Controls

- Contracting, Phase II
- Dispute Prevention and Resolution
- International Standards
- Predictive Tools
- Quality Performance Measurement
- Schedule Reduction
- Total Quality Management

Sigma

- Barriers to Implementation
- Insurance
- Piping Function
- Retrofit Projects
- U.S. Navy Demonstration Project
- Utility Pilot Projects
- Workers Compensation

Construction Industry Institute®
The University of Texas at Austin
3925 W. Braker Lane (R4500)
Austin, Texas 78759-5316
(512) 232-3000
FAX (512) 499-8101

Not printed with state funds

Allocation of Insurance-Related Risks and Costs on Construction Projects

**Prepared by
Construction Industry Institute
Insurance Task Force**

**Publication 19-1
November 1993**

© 1993 Construction Industry Institute™.

The University of Texas at Austin.

CII members may reproduce and distribute this work internally in any medium at no cost to internal recipients. CII members are permitted to revise and adapt this work for the internal use, provided an informational copy is furnished to CII.

Available to non-members by purchase; however, no copies may be made or distributed and no modifications may be made without prior written permission from CII. Contact CII at <http://construction-institute.org/catalog.htm> to purchase copies. Volume discounts may be available.

All CII members, current students, and faculty at a college or university are eligible to purchase CII products at member prices. Faculty and students at a college or university may reproduce and distribute this work without modification for educational use.

Printed in the United States of America.

Contents

<i>Chapter</i>	<i>Page</i>
Executive Summary	v
1 Introduction	1
2 Purpose and Scope of Study	3
3 Risk Management and Risk Allocation in the Construction Industry	5
4 Insurance in the Construction Industry	10
5 Conclusions and Recommendations	14
Construction Safety Practices	15
Indemnification by Contractors of Owners	15
Contractors' Liability for Damage to Owner Property	16
Construction Project Risk Funding	16
Education and Planning	17
Appendix A: Basic Risk Management and Insurance Concepts	20
Appendix B: The Insurance Industry	25
Glossary of Terms	32
References	38

Executive Summary

The Insurance Task Force was formed by CII as a result of the extremely hard market for *liability insurance* that was experienced in the late 1980s. The purpose of the task force was to study the impact of current insurance circumstances on the construction industry and the results of that study are presented herein.

The construction industry presents a complicated variety of exposures to accidental loss ranging from injury to personnel and property to loss of income and other liability exposures. The identification, measurement, and control of these *risks* is commonly referred to as *risk management*. A better understanding of risk management and insurance concepts as they relate to the construction industry is necessary.

To achieve the optimal allocation of insurance-related risks and costs on construction projects, owners and contractors must change their attitudes in contract negotiations. Owners and contractors must realize that the costs associated with risk financing on projects has become a significant portion of total project cost (5-7 percent as compared to 1-2 percent in the mid-1980s), and that with proper management and cooperation these costs are controllable.

In addition to changing the relationship between owner and contractor, the task force recommends that changes be made in the following areas:

- Tort reform
- Construction safety practices
- Indemnification requirements
- Contractors' liability for damage to owner property
- Construction project risk financing
- Education and planning

All of the above recommendations, with the exception of tort reform, are easily and readily achievable today. All that is required to achieve this goal of reducing the insurance-related costs on construction projects is a desire to do so and cooperation between owners and contractors.

(A note to readers: Words in italics are defined in the Glossary.)

Introduction

All construction projects present a complicated variety of exposures to accidental loss. Project participants face the risks of injury to personnel, damage to property, untimely performance, loss or damage to construction equipment, unacceptable work product, loss of income, damage to newly installed facilities as well as other liability exposures.

Traditionally the owner and contractor each strive to obtain terms most favorable to themselves. In the heat of negotiations, the parties can easily overlook an important consideration—the cost of victory. When one party minimizes the risk that it retains, the overall project cost is often increased to cover risk financing and/or *transfer* by an amount greater than is necessary because the risks are not optimally allocated among the parties. This study investigates how risks are shared among construction project participants and provides insights as to how optimal *risk sharing* can minimize risk-bearing costs and how risk management activities can best be utilized to lower overall project costs.

During the mid-1980s, the U.S. and most other countries experienced substantial increases in the costs of various types of insurance, most notably *liability insurance*. Costs of certain types of liability insurance increased so drastically that entities were forced to alter their insurance buying practices: some parties elected to discontinue *coverages*; others organized into groups of *self-insurers* or formed *group captives*; and a few took other extraordinary steps to cope with the problems created by the crisis.

CII responded by forming the Insurance Task Force. The task force was to study “underwriting cycles” and the liability crisis with a view toward anticipating and avoiding problems in the future.

The task force has now studied how risk is currently shared among the parties to construction contracts and concludes that a new approach could optimize risk treatment, thereby lowering project costs related to insurance and other risk financing practices.

The task force believes that the impacts on construction can be diminished if projects would rely less on insurance (and other risk financing arrangements). This should avoid duplication of risk-bearing responsibilities and inefficient allocation of exposure to losses. Future success will require focusing more on cooperation and loss prevention than is currently the norm.

We recommend that readers take certain special steps in their preparations. These steps include:

1. Allocating project risks in a manner to avoid duplication of expenditures for risk financing and/or insurance.
2. Enhancing safety programs.
3. Using higher deductibles and/or self-insured retentions.
4. Handling uninsured exposures in innovative ways.
5. Developing long-term relationships among construction project participants (including insurers) based on cooperation and trust.

Purpose and Scope of Study

In recent years, the insurance market has gone through an “underwriting cycle” with wide fluctuations, changing from a “soft market” with relatively low prices and great capacity to a “hard market” with relatively high prices and restricted capacity and back to a “soft market.” What caused this phenomenon and when will the current “soft market” end?

A major liability insurance crisis involving supply (availability) and price (affordability) problems occurred during the last hard market (from the end of 1984 through 1986). Four major competing hypotheses for this are: (1) insurers have pointed to falling interest rates and the related decrease in investment income; (2) the unpredictable nature of the legal liability system and the trend in the courts to reinterpret insurance contracts and expand coverages, as well as, litigation based on contingent fees for trial attorneys; (3) consumer organizations have suggested insurer mismanagement and/or greed; and (4) the Attorneys General of 20 states have asserted that the crisis was the result of collective collusion and conspiracy by insurers to raise prices and restrict coverage.

Liability insurance contracts cover legal or tort liabilities. Since it is the *tort liability system* that defines legal liabilities, this system both creates the demand for liability insurance and influences the scope of the coverage provided. Thus, liability insurance costs are driven to a large extent by the evolving tort-liability system. The pessimistic views and loss of confidence by insurers in their ability to predict future loss payments, due primarily to uncertainty about legal standards and expansive judicial interpretations of insurance contracts, seem to provide the best explanatory hypothesis for the sudden increase in liability insurance prices and the reduced availability of coverage in the mid-1980s. Because liability insurance contracts involve promises to pay in the future, prospective changes in the nature and/or quantum of insured perils have a dramatic impact on insurer expectations and the price and supply of coverage in the marketplace. Legal uncertainty due to the expansive interpretations applied to insurance contracts by the courts resulting in retroactive liability for insurers has made them increase their *rates* dramatically.

In addition to legal uncertainty, numerous economic factors have contributed to the insurers' loss of confidence. The insurance business is characterized by cyclical fluctuations which are commonly called the underwriting cycle. The 1984 crisis was in many senses simply a much more extreme "down" portion of the hard market cycle than had ever been encountered. The underwriting cycle is, in general, caused by the following factors: variations in interest rates, investment income, underwriting standards, inflation expectations, and the availability and price of *reinsurance*; legal uncertainty about future claim *severity* and *frequency*; and the varying nature of competition in insurance markets, including the conditions in alternative risk financing markets (such as the *captive markets*) and in other alternative insurance markets (such as in the excess and surplus lines market).

Of particular importance to the crisis of the mid-1980s were the legal uncertainties about the ultimate liability of the insurance industry for catastrophic losses arising out of asbestos and hazardous wastes claims. Such claims were often unexpectedly imposed on the insurance industry by expansive legal doctrines as to the nature of the losses covered by insurance contracts and the degree of responsibility necessary for liability to be imposed. This change in legal doctrine resulted in a growing realization by insurers in the mid-1980s that their liability loss reserves may have been severely undervalued. This put at risk their very existence and created panic and fear which, in turn, led to drastic restrictions in the coverages available as well as increased prices for the limited coverage that was available. Loss reserve strengthening early in the crisis greatly reduced insurers' capital and surplus, which is the source of insurance capacity.

Risk Management and Risk Allocation in the Construction Industry

Construction, because of its unique nature, requires that particular attention be paid to the management of its inherent high risks. For purposes here, attention is focused on pure risk rather than *speculative risk*. With pure risk, there is a possibility of a loss or no loss; whereas there can be a gain or a loss with a speculative risk. Given the high risk level, it is appropriate that the majority of contractors actively involve their risk management personnel in their construction projects. Surprisingly, few owners involve their risk management personnel in their projects. This confirms the potential of an area to focus increased efforts that would result in improved risk management and help to reduce the total cost of risk associated with construction projects.

Construction presents a number of insurance related risks, each with financial implications to the project. Chief among these is workers' compensation. While presenting the single largest source of potential loss, it is the most controllable, albeit with significant legal complexities. General liability's impact is readily apparent. Two other areas are "physical damage to work in progress" and "physical damage to existing property," which are examples of insurable risks that can be more effectively managed through a strong positive client/contractor relationship. Greater emphasis on cooperation and trust here could help reduce the cost of risk through the development of a Cooperative Risk Management and Risk Financing Program.

Loss control techniques, together with solid safety programs (in place and working), have the greatest potential for cost control. Also, in any program it is imperative that some type of Risk Management Information Systems (RMIS) be established in order to provide the detailed information that is needed. This data is useful for a current project and when combined with historical data gained from previous work can enable contractors and owners to maximize their efforts and track and project their benefits. An effective RMIS is essential if a cost-efficient Risk Management Program is to be achieved.

Risk management should be a major concern of all parties involved in a construction project in order to minimize the total cost of risk associated with construction projects. Greater emphasis needs to be placed on developing substantive relationships based on cooperation and trust in order to achieve this risk-cost minimization objective for the construction industry.

First and foremost, both contractors and owners should become aware of the various mechanisms for risk allocation. Risk can be allocated through: (1) the tort system; (2) contractual risk transfers; (3) the use of insurance; or (4) a company's organization structure. An awareness and understanding of these mechanisms is crucial for determining the optimal way risk should be allocated among the parties to the contract and selecting the party best suited to take advantage of the available mechanisms. Furthermore, contractors and owners need to understand the implications of any specific risk allocation with regard to the costs associated with efficiency, incentives, and morale. These costs must be identified in advance and taken into account during negotiations between the two parties in order to minimize the total cost of risk.

The most controllable risk allocation technique is contractual risk transfer. Two major concepts need to be considered. An efficient allocation of risk assigns each risk to the party that can bear the risk at the lowest cost (least-cost risk bearer). While such an allocation minimizes the costs associated directly with bearing and transferring the risk, it can bring about indirect costs associated with misaligned incentives, mistrust, and an increase in disputes. Thus, the typical situation of owners shifting risk to contractors, who in turn shift risk to subcontractors, will not result in an efficient allocation of risk. On the other hand, an equitable allocation of risk would assign each risk to the party best able to control it. Such an allocation minimizes the indirect costs associated with misaligned incentives, mistrust, and disputes. Because of the advantages and disadvantages associated with efficient and equitable allocations of risk, each project should be assessed individually to determine for each risk what allocation consideration will reduce the project's total cost of risk.

The goal of an optimal allocation of risk is to minimize the total cost of risk on a project, not necessarily the costs to each party separately. Thus, it might sometimes seem as if one party is bearing more of the risk costs than the other party. However, if

both owners and contractors take a long-term view, and take into consideration the benefits of consistently applying an optimal method to themselves and to the rest of their industry, they will realize that over time optimizing risk allocation reduces everyone's costs and increases the competitiveness of all parties involved.

One example of such a long-term commitment and planning is *partnering*. Partnering is a way of structuring the relationship between the owner and the contractor for the long run in such a manner as to provide the mechanisms that will allow for true cost reductions and increased productivity in all realms, including risk allocation.

Participants in the construction industry need to take a long-term view of risk allocation for risk management purposes. Some parties can obtain short-run advantages by shifting risk to weaker parties. In the long run, however, the construction industry will bear the cost of an inefficient allocation of risk. Therefore, it is important for all parties to cooperate and attain the optimal level in terms of risk allocation in order to develop and maintain a competitive advantage.

Proper allocation of risk between parties involved in a construction project will reduce the overall cost to the project and promote a much more positive working relationship between the parties. This can be accomplished by assigning each risk addressed in the contract to the party that (1) has a comparative advantage in regard to risk bearing ability and (2) has control over the risk.

Motivation is another important consideration when assessing the allocation of risk. If contractors are continually losing money due to risks that are beyond their control, those contractors will not be nearly as interested in good service and performance for the owner, and may even attempt to save costs by cutting corners in order to recoup some of the lost profit. If the *indemnification clause* in the contract equitably distributes responsibilities, then insurance certificates and status as additional insured (limited to that indemnification provision) are important. If the indemnity clause is too broad, the contractual liability portion of the contractor's general liability policy may well not even extend to those liabilities. Stated another way, the contract terms may be broader than the insurance policy's coverage.

A more equitable way to cover these liabilities may be to use a *comparative negligence indemnity*, where each party pays their portion of responsibility as determined by the courts. Another way would be to set up a project specific liability policy in the form of a *wrap-up program* or a stand-alone liability policy specific to the particular exposures of the project. *Waivers of subrogation* between the owner and contractor are important because even if these two parties have agreed on who will be responsible for a particular type loss, their insurance carrier may have other ideas. If contractors do not participate heavily in paying their own losses with their insurers, they may not be able to control who the insurance company subrogates against, unless the right is waived by the contractors prior to a loss.

The key to avoiding improper allocation of risk and the additional expense that it incurs is negotiating the contractual agreement in advance and then each party providing the proper risk financing, loss prevention, and loss control measures for that potential liability.

The vehicle most commonly used to allocate risk is the *hold harmless agreement*. A hold harmless agreement or indemnity clause is a contractual agreement which determines the distribution of liability for accidents or other risks between the contracting parties. These clauses are frequently used to shift risk from one party to another. The three common forms of indemnity clauses are:

- (1) broad
- (2) limited
- (3) intermediate

In the *broad* form of hold harmless agreements, the indemnitor accepts responsibility for all its negligent acts, the joint and concurrent negligence of itself and the indemnitee, and the sole negligence of the indemnitee. A *limited* form hold harmless agreement is one where the indemnitor accepts all responsibility for its own negligence. In addition, the agreement specifies that the indemnitor share in the payment for any portion of fault that it is determined to bear in the event of an injury where there exists joint liability with the indemnitee. Under an *intermediate* form of indemnity, the indemnitor agrees to accept responsibility for all losses, except those resulting from the indemnitee's sole negligence. This is the form most frequently included in construction contracts.