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1.040 Project Management
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Identifying & Covering Risks – Current Trends

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Managing Construction Risk

1. An Integrated Approach
2. Identifying Project Risks
3. Allocation of Risk
4. Economical Solutions to Risk

Key Point #1

*A Method for Managing
Construction Project Risks*

Integrated Project Risk Management

Risk Financing

- Self Funded
- Owner Control
- Incentive Bonus

Dispute Resolution

- On-Site Resolution
- Mediation/Arbitration
- Contractual

Loss Prevention

- Risk Identification
- Contract Formation
- Scheduling

Integrated Project Risk Management – Builders' Risk

Risk Financing

- Owner Buys?
- Cont. Buys?
- Build Risk?
- Delay of Opening
- Force Majeure

Dispute Resolution

- Allocation of Deductible
- How Does Claim Get Resolved?

Loss Prevention

- Risk ID
- Contract Wording
- Site Security
- Disaster Planning

Key Point #2

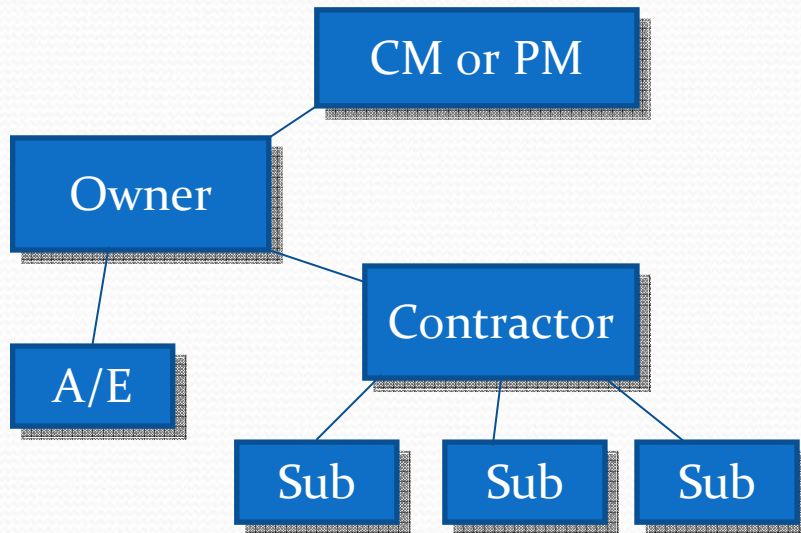
Identifying Project Risks

Risk Identification

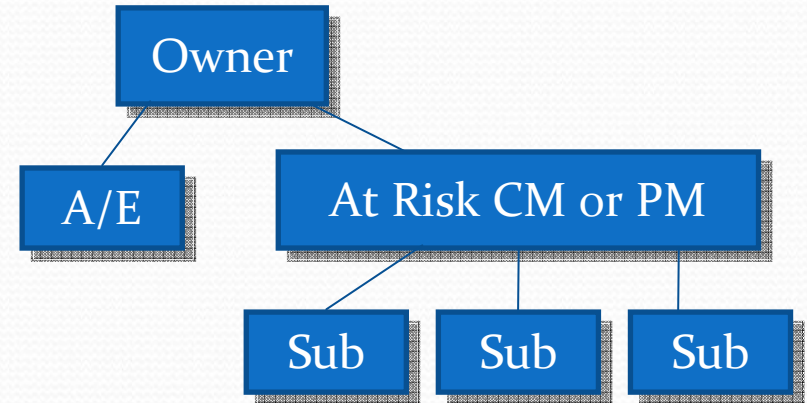
- Project Type & Site
- Project Participants
- Project Delivery Method
- Budget & Financing
- Scheduling
- Legal
- Political

By Project Delivery Methods

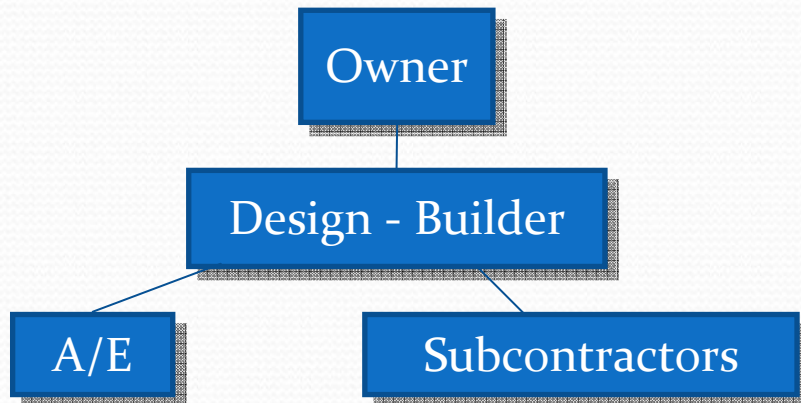
Agency CM or PM



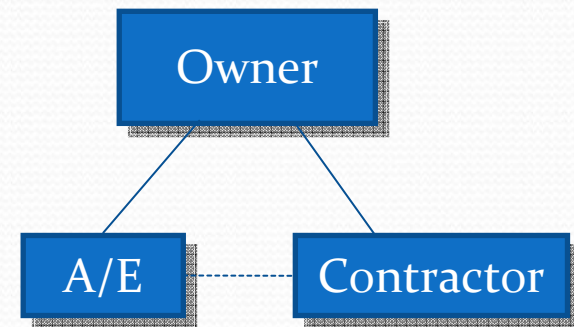
At-Risk CM or PM



Design-Build



Design-Bid-Build



Key Point #3

Choice in Risk Allocation

Responsibility for Risk

By Law

Statutes
Regulations
Common Law

By Contract

Risk Shifting
Insurance

By Default

Denial of Responsibility
Acceptance of Responsibility

Fair Allocation of Risk

- ✓ Which Party can best control risk
- ✓ Which party can best finance the risk
- ✓ Which party can best manage the risk
- ✓ Which party can more easily accept the consequence of risk

Risk Matrix

Risks	Owner	Architect/Engineer	Contractor	Subcontractor
Injury to contractor's employees	General Liability or owner's protective	Professional liability or general liability	Workers' compensation	General Liability
Injury to subcontractor's employees	General liability or owners protective	Professional liability or general liability	General liability	Workers' compensation
Injury to general public	General liability or owner's protective	Professional liability or general liability	General liability	General liability
Physical damage to project during construction	Builder's risk	Professional liability or general liability	Builder's risk	Builder's Risk
Physical damage to project after construction	Property policy	Professional liability	General liability (completed operations)	General liability (completed operations)

Approaches to Avoid and Reduce Claims

- Realistic Contractual Allocation of Risks
- Match Risk Allocation to Compensation
- Dispute Prevention through Incentive Programs
- Use Integrated Programs to Protect all Parties

Key Point #4

*Economical Solutions for
Construction Risks*

Allocation of Insurance-Related Risks & Costs: Strategies

Construction Industry Institute Study (1993)

- Invest in Loss Control and Safety Programs
- Limited Indemnity by Contractors
- Less Insurance, More Risk Management
- Controlled Insurance Programs – Not New.
What is New is increasing Utilization

Key Point #5

*Controlled Insurance Programs
(CIP's)*

Definition of Wrap-Up:

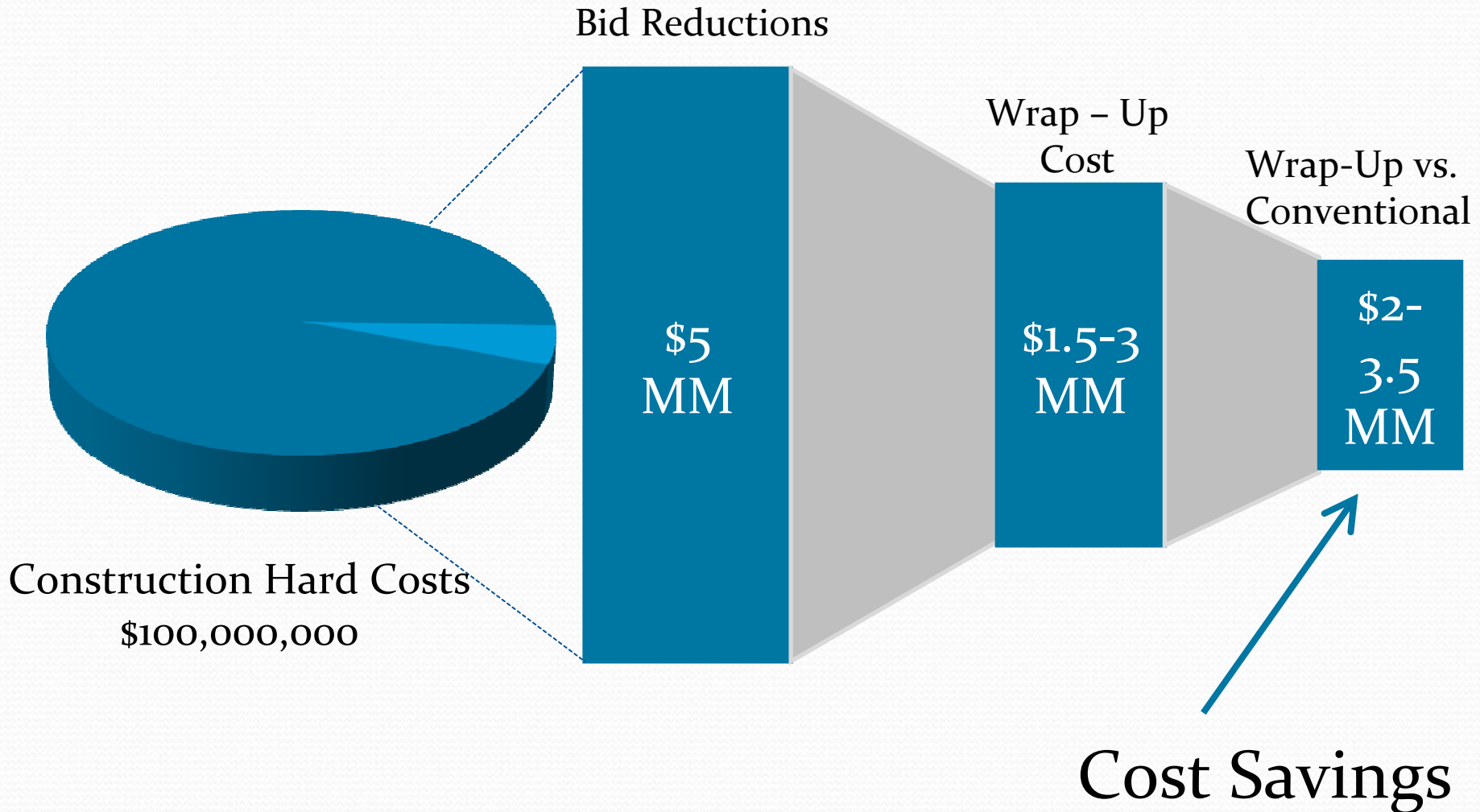
(or CIP, CCIP, DCIP, OCIP)

- The purchase of the following insurance coverages by one entity for all firms working at the jobsite(s):
 - Workers' Compensation
 - General and Umbrella Liability
 - Professional Liability
 - Builders' Risk
- Professional coverage begins when design starts, others when construction starts and all continue for three to five years after completion

Owner- or Contractor-Controlled Insurance Program

- Wrap-up Advantages
 - Cost Savings
 - Control
 - Public Relations

Wrap-up Feasibility



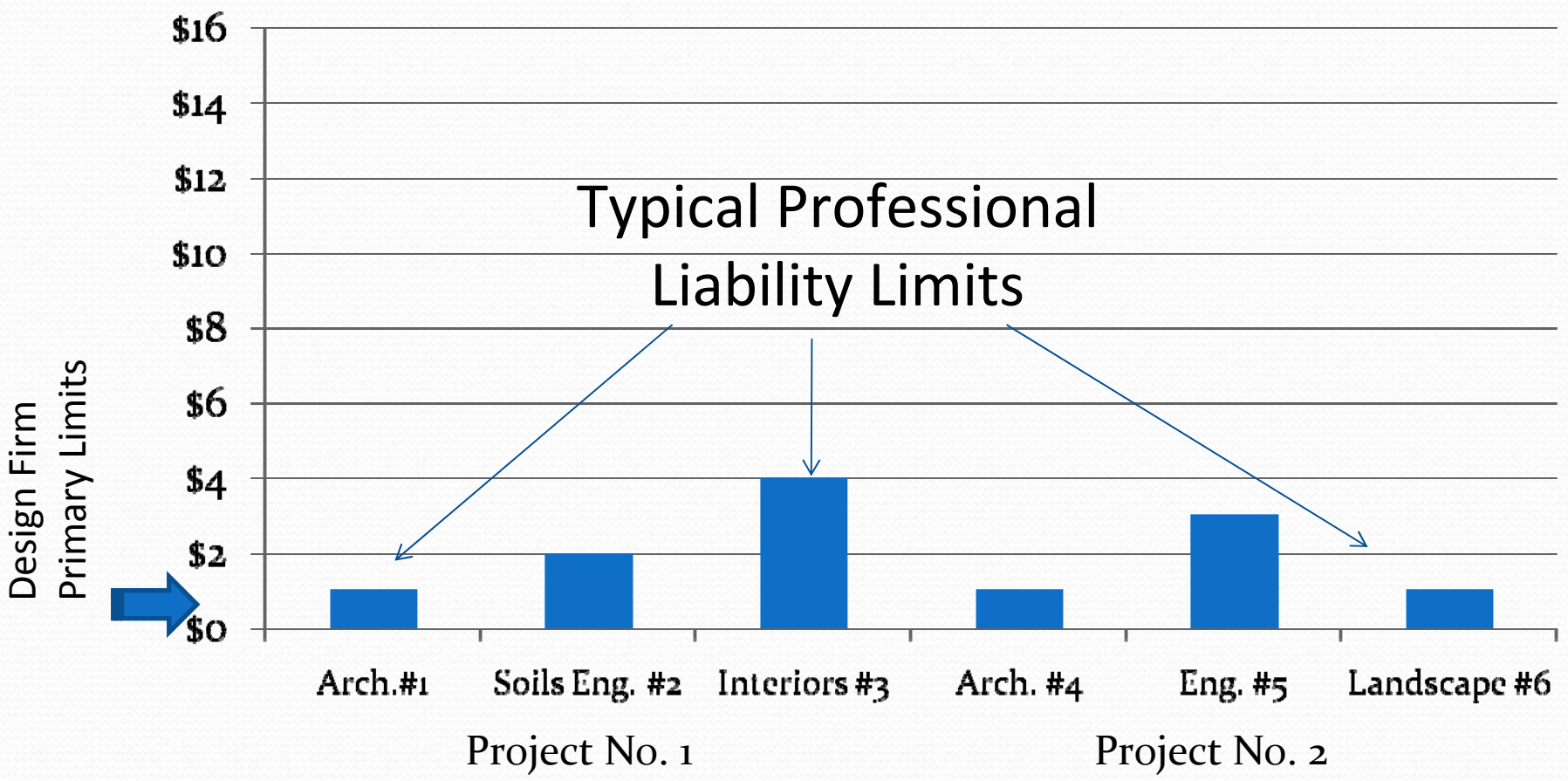
Key Point #6

*Project Professional
Policies*

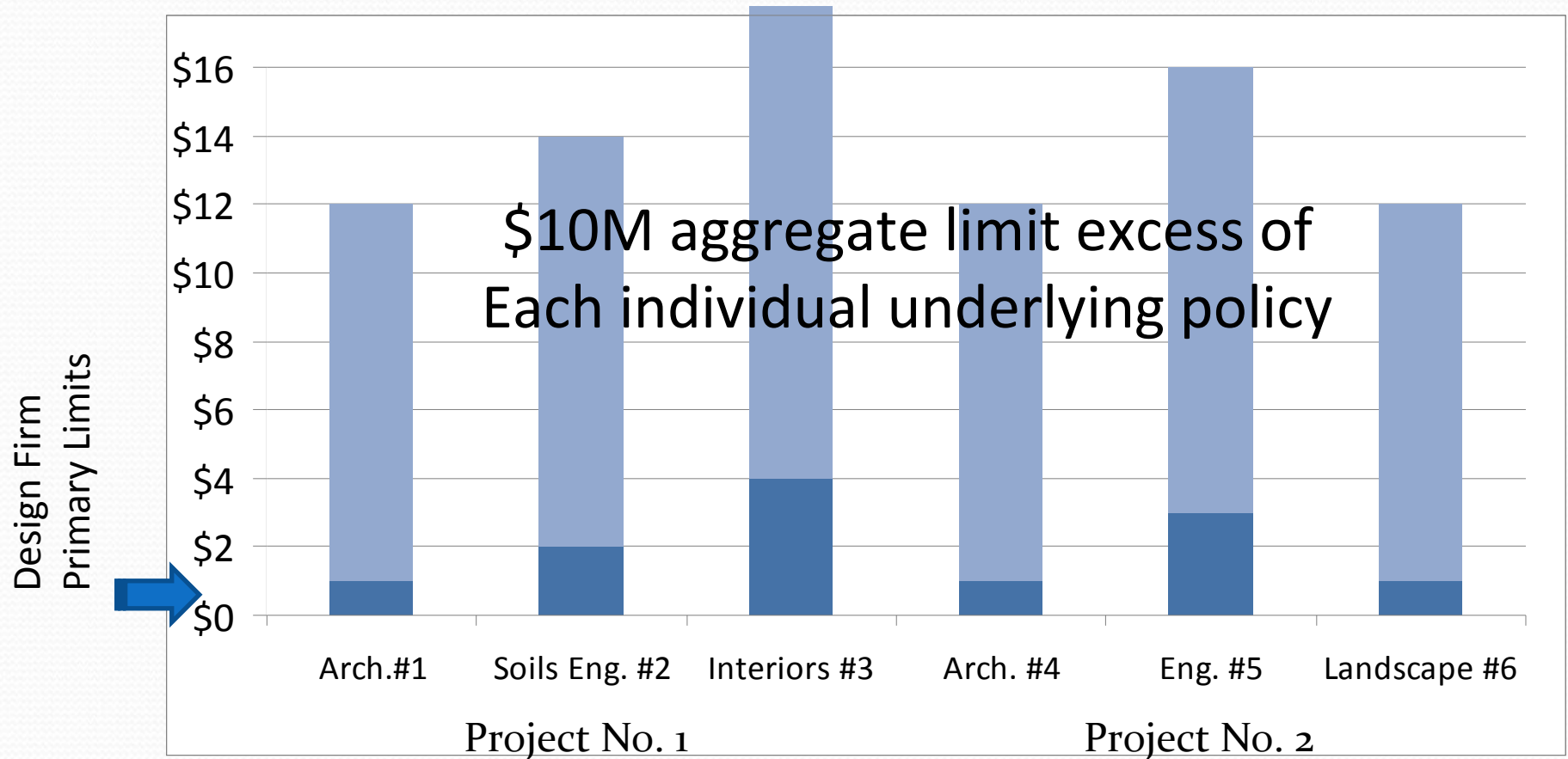
Pitfalls in Professional Liability Insurance

- Problems – Low, Aggregated Limits
- Solutions
 - Good certificate of insurance backed by contract requirements
 - Buy project professional insurance on larger projects
 - Buy owners' protective insurance

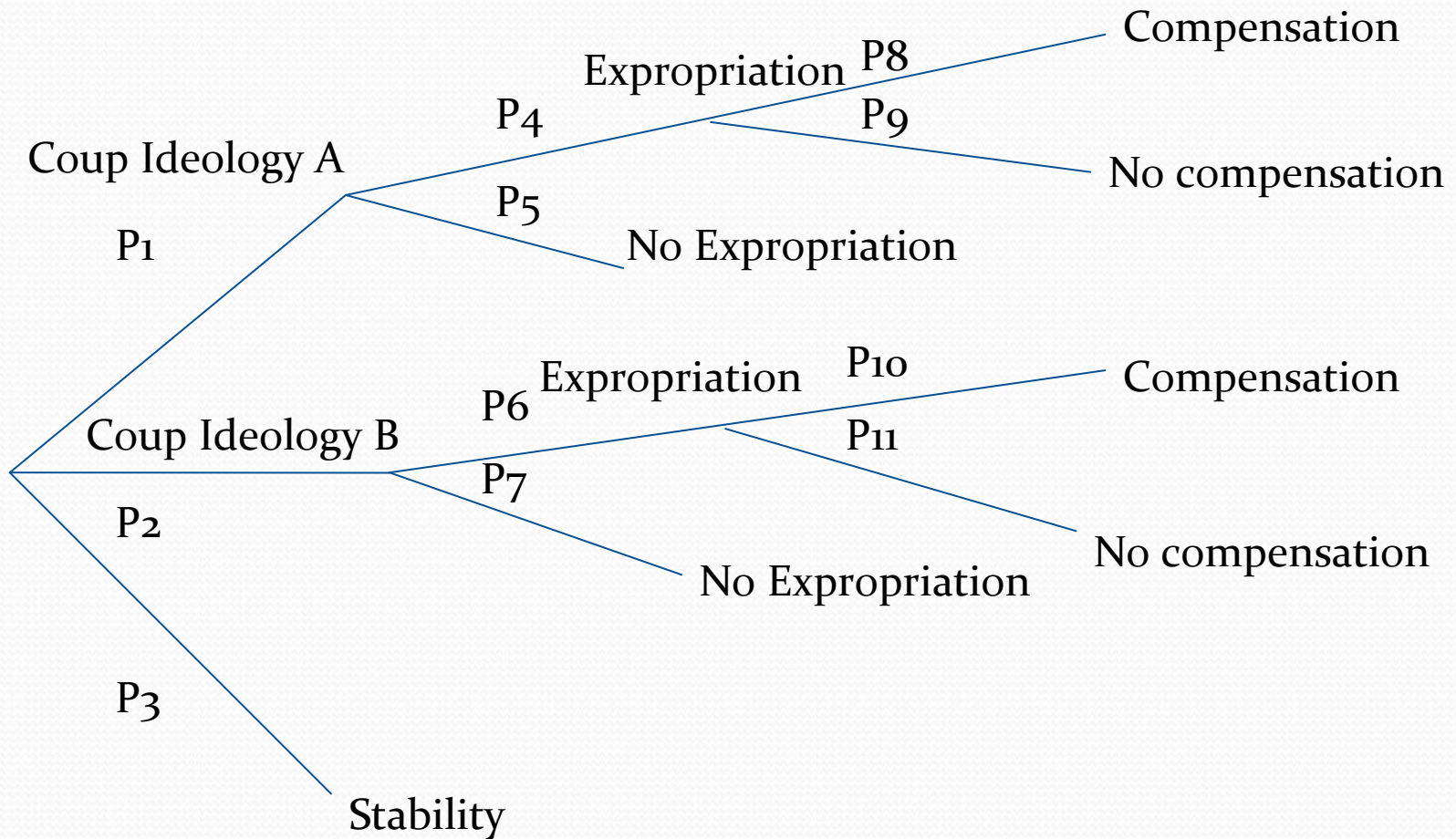
Owner's Protective Professional Liability: Sample Program



Owners Protective Professional Liability Sample Program



Political Risk Modeling



$$\text{Probability of Expropriation without compensation} = P_1 \times P_4 \times P_9 + P_2 \times P_6 \times P_{11}$$