



The Definition of Insurance

Michael E. Angelina ACAS, MAAA, CERA
Saint Joseph's University

Academic Definition of Insurance

- Insurance is the pooling of fortuitous losses by transfer of such risks to insurers, who agree to indemnify insureds for such losses, to provide other pecuniary benefits on their occurrence, or to render services connected with the risk
- Pooling of losses
 - Pooling involves spreading losses incurred by the few over the entire group
 - Risk reduction is based on the Law of Large Numbers
 - According to the Law of Large Numbers, the greater the number of exposures, the more closely will the actual results approach the probable results that are expected from an infinite number of exposures.

Definition of Insurance

- Background
 - Many definitions, but no standard definition
 - Convergence around several elements, themes, and attributes
- What is Insurance Risk?
 - Risk of loss
 - Hurricanes in North Dakota – likely not
 - Earthquakes - yes
 - Credit Default Insurance
 - 2007-08 highlighted these products do indeed contain risk
 - Insurance Risk versus Ordinary Business Risk – is this insurable?
 - Airlines, cargo, oil rigs, farmers, public livery, pharmaceuticals, etc
 - Insurance Risk versus Investment Risk

Elements of Insurance

- **Attributes – Vaughan, Emmett J. and Therese 2008**
 - Transferring or shifting of risk from one individual to a group; and
 - Sharing losses, on some equitable basis, by all members of the group.
- **Principles - Plitt, Steven, et al. 2013**
 - The principle of indemnity;
 - The principle of fortuity; and
 - The insurable interest requirement.
- **Characteristics – Rejda, George 2014**
 - Pool-able;
 - Determinable;
 - Calculable; and
 - Manageable

Evaluation of Insurance

■ Insurance Risk?

- Does the risk meet the elements described on prior page
 - Attributes, principles, and characteristics (“ables”)

■ Is there sufficient Risk Distribution

- Does the law of large numbers apply and reduce portfolio variance
- What is a credible number – reasonably self evident ?

■ Other Common Forms

- Policies, wording, regulation, regulatory filings;
- Pricing (actuarial) and underwriting;
- Similar to current types of insurance
 - Personal lines versus Lloyds of London
- Aleatory Contract
 - Values exchanged are not necessarily equal in value