Life Insurance Basics

Alexandra Kushnir MD
Marta Kushnir MD

Shevchenko Society Lecture November 2009

Summary

- Society through the ages has wanted to preserve and protect what it holds dear
- Insurance companies play a major role in national economics
- They provide protection from loss and offer economic loss and provide measures of financial security
- Accurate medical information is essential to the risk assessment process
- Insurance is a contractual product who must meet set criteria in the underwriting process

Origins of Life Insurance

- Babylon 4500 years ago traders bore risks of the caravan trade by giving loans to be repaid with interest if they arrived safely
- In 2100BC the code of Hammurabi and granted legal status to this practice
- Life insurance started in Rome with “burial clubs” for citizens which paid funeral expenses as well as provided for survivors

Origins (cont.'d)

- With the additions of sea routes for trade ships were protected against fire, loss or robbery by pirates so member traders offered a form of insurance
- Around this time families of traders were also supported in times of poverty or sickness
- In 1347 European maritime nations entered into the earliest form of an insurance contract and made it into common practice

Origins (cont.'d)

- Insurance as we understand it now, goes back to the 17^{th} century at Lloyd's coffee house in London where ship owners, merchants and investors met to transact business
- Later in the 18^{th} century Lloyd's became one of the first modern insurance companies which exist today
- In 1735, the first US insurance company was formed in the colonial city of Charleston, SC
- In 1759 the first US life insurance company was formed in Philadelphia by the Presbyterian Church for ministers and their families

The Growing Years

- The 19th century witnessed broader product offerings to meet the needs of urbanization and industrialization
- The great fire of Chicago in 1871 as well as one in New York City in 1835 emphasized further how densely populated cities could sustain great losses
- At this time, specifically designed insurance companies were developed to divide the risk among themselves and absorb costs of potential loss

What is Life Insurance ?

- A contract between the policy holder and the insurer
- The insurer agrees to pay a sum of money upon the insured's death
- In return the insured (policy holder) agrees to pay a set amount called a premium on a regular basis
- According to a study by Swiss-Re, as of 2005, the EU was the largest market for life insurance followed by the US and Japan

Risk Assessment

- The idea of calculating premiums based on age and mortality was first developed in England
- In order to produce sound life insurance products, there must be an ability to predict mortality risk in the insured population as accurately as possible
- Mortality rate is the frequency with which death occurs among a defined number of people
- Probability is the likelihood of an event occurring within a set period of time

Risk Assessment (cont'd.)

- The law of large numbers states that the greater number of observations (of events), the more likely the results will be the same as the probability (likelihood of the event occurring)
- Using theories of probability and the law of large numbers, in a given population it is possible to fairly accurately predict how many people will die during a certain period of time

Risk Factors in Life Insurance

- The presence of disease or medical condition like diabetes, cancer, heart disease
- Build – height and weight both underweight and overweight are additional risk factors
- Occupation
- Hobbies
- Substance abuse
- Criminal record

Risk Classification according to a Numerical Rating System

- Standard risk is defined as an average mortality and premium payment is commensurate with standard premium rates based on a mortality of 100%
- Impaired or substandard risk is defined as a higher mortality and premium rates are higher – greater than 100%
- Uninsurable is defined as a risk for early mortality and insurance cannot be offered

Sources of Information for Risk Assessment

- Medical questionnaire and medical exam at time of application (bloodwork and EKG may be included)
- Attending Physicians Statements (APS) from all physician seen within 5 years
- MIB (Medical Information Bureau) codes which are maintained throughout a lifetime at any insurance application in the past or present

Additional Points

- Calculating mortality in most insurance companies is done by actuaries
- The most extensive mortality statistics are collected by the Society of Actuaries (SOA) which collects data from government agencies and insurance companies
- In general the mortality rate increases as people grow older because the likelihood of having a disease increases