

Session 4: Life Insurance and Liability Risk

1. Richard, age 45, is married with two children in high school. He estimates that his average annual earnings over the next 20 years will be \$60,000. He estimates that one-third of his average annual earnings will be used to pay taxes, insurance premiums, and the costs of self-maintenance. The remainder will be used to support his family. Richard wants to calculate his human life value and believes a 6 percent discount rate is appropriate. The present value of \$1 payable for 20 years at a discount rate of 6 percent is \$11.47. Calculate Richard's human life value with and without taking time value of money into consideration.
2. a. The human life value is one method for estimating the amount of life insurance to own. Keeping all other factors unchanged, explain the effect, if any, of each of the following:
 1. The amount of average annual income going to the family is increased.
 2. The period over which income is paid to the family is reduced.b. Explain the limitations of the human life value approach as a method for determining the amount of life insurance to own.
3. Kelly, age 35, is a single parent and has a one-year old son. She earns \$45,000 annually as a marketing analyst. Her employer provides group life insurance in the amount of twice the employee's salary. Kelly also participates in her employer's 401(k) plan. She has the following financial needs and objectives:

■ Funeral costs and uninsured medical bills	\$ 10,000
■ Income support for her son	\$2,000 monthly for 17 years
■ Pay off mortgage on home	150,000
■ Pay off car loan and credit card debts	15,000
■ College education fund for son	150,000

Kelly has the following financial assets:

■ Checking account	\$ 2,000
■ IRA account	8,000
■ 401(k) plan	25,000
■ Individual life insurance	25,000
■ Group life insurance	90,000

 - a) Ignoring the availability of Social Security survivor benefits, how much additional life insurance, if any, should Kelly purchase to meet her financial goals based on the needs approach? (Assume that the rate of return earned on the policy proceeds is equal to the rate of inflation.)
 - b) How much additional life insurance, if any, is needed if estimated Social Security survivor benefits in the amount of \$800 monthly are payable until her son attains age 18?
4. Janet, age 28, is married and has a son, age 3. She wants to determine how much life insurance she should own based on the capital retention approach. She would like to provide \$30,000 each year before taxes to her family if she should die. She owns a house jointly with her husband that has a current market value of \$250,000 and a mortgage balance of \$100,000. She also owes \$16,000 on a car loan and credit cards. She would like to have the mortgage, car loan, and credit card debts paid off if she should die. She has no investments, and her checking account balance is only \$1000. She owns an individual life insurance policy in the amount of \$100,000 that her parents

purchased for her when she was a baby. Estimated Social Security survivor benefits are \$10,000 annually. Janet assumes the life insurance proceeds can be invested at 5 percent interest. Based on the capital retention approach, how much additional life insurance, if any, should Janet purchase to meet her financial goals?

5. Megan, age 32, is married and has a son, age 1. She recently purchased a cash-value life insurance policy that has the following characteristics:
- The frequency and amount of premium payments are flexible.
 - The insurance and saving components are separate.
 - The interest rate credited to the policy is tied to current market conditions, but the policy guarantees a minimum interest rate.
 - The policy has a back-end surrender charge that declines to zero over some time period.

Based on the above characteristics, what type of life insurance did Megan purchase? Explain your answer.

6. Todd, age 28, would like to save money for a comfortable retirement. He is considering purchasing a cash-value life insurance policy that has the following characteristics:
- The premiums are invested in separate investment accounts selected by the policyholder.
 - Interest income and capital gains are not currently taxable to the policyholder.
 - The frequency and amount of premium payments can be changed as financial circumstances change.
 - A mortality and expense (M&E) charge is periodically deducted from the cash value account.

Based on the above characteristics, what type of life insurance is Todd considering purchasing? Explain your answer.

7. Life insurance policies have different characteristics. For each of the following, identify the life insurance policy that meets the description:
- a. A policy where the face amount of insurance increases if the investment results are favorable
 - b. A policy that can be used to insure the human life value of an individual, age 35, at the lowest possible annual premium
 - c. A policy that permits the policyholder to determine how the premiums are to be invested
 - d. A policy that allows cash withdrawals for a down payment on a home or payment of college tuition
 - e. A policy that is sold to applicants whose mortality experience is expected to be lower than average
 - f. A policy in which premiums are lower for the first three to five years and higher thereafter, which may appeal to insureds whose incomes are expected to increase
 - g. A policy designed to pay estate taxes upon the death of the last surviving spouse

8. Richard, age 35, is married and has two children, ages 2 and 5. He is considering the purchase of additional life insurance. He has the following financial goals and objectives:
- Pay off the mortgage on his home, which has 25 years remaining
 - Accumulation of a sizeable retirement fund
 - Payment of monthly income to the family if he should die
 - Withdrawal of funds from the policy when the children reach college age
- For each of the following life insurance policies, indicate which of the above financial goals, if any, could be met if the policy is purchased. Treat each policy separately.
- a. Decreasing term insurance
 - b. Ordinary life insurance
 - c. Universal life insurance
 - d. Variable universal life insurance
9. Smith Construction is building a warehouse for Raymond. The construction firm routinely leaves certain construction equipment at the building site overnight and on weekends. Late one night, Fred, age 10, began playing on some of Smith's construction equipment. Fred accidentally released the brakes of a tractor on which he was playing, and the tractor rolled down a hill and smashed into the building under construction. Fred was severely injured in the accident. Fred's parents sued both Smith Construction and Raymond for the injury.
- a. Based on the elements of negligence, describe the requirements that must be met for Smith Construction to be held liable for negligence.
 - b. Describe the various classes of persons that are recognized by the law with respect to entering upon the property of another. In which class of persons would Fred belong?
 - c. What other legal doctrine is applicable in this case because of Fred's age? Explain your answer.
10. a. Parkway Distributors is a wholesale firm that employs several outside salespersons. Emily, a salesperson employed by Parkway Distributors, was involved in an accident with another motorist while she was using her car to make regular sales calls for Parkway Distributors. Emily and the motorist are seriously injured in the accident. The motorist sues both Emily and Parkway Distributors for the injury based on negligence.
1. Describe the requirements that the motorist must establish to show that Emily is guilty of negligence.
 2. On what legal basis might Parkway Distributors be held legally liable for the injury to the motorist? Explain your answer.
- b. Tom asks his girlfriend, Megan, to go to a supermarket and purchase some steaks for dinner. While driving Tom's car to the supermarket, Megan failed to stop at a red light and seriously injured a pedestrian. Does Tom have any legal liability for the injury? Explain your answer.