***Financial Markets and Institutions, 7e* (Saunders)**

**Chapter 15 Insurance Companies**

1) A man has what he believes is a mild heart attack but he doesn't go to the hospital. Instead he calls his insurance agent and doubles the amount of his life insurance. This is an example of the moral hazard problem in insurance.

2) In a typical variable life policy the policyholder may vary the premium payments and the maturity date of the policy.

3) In a universal life policy the cash value of the contract grows at a fixed rate set by the life insurer.

4) A 65-year-old person has saved $1,250,000 and wishes to receive 10 annual annuity payments, beginning in one year. If the annuity rate is 5.75 percent, he can expect to receive $167,829 per year.

5) Premiums on standard annual renewable term life will generally increase as the policyholder ages.

6) Policy reserves are the primary asset of the typical life insurer.

7) Life insurers write over 50 percent of all health insurance premiums.

8) Life insurance policy reserves are the estimated current worth of expected future payouts.

9) The cash surrender value of a life insurance policy is the present value of expected future payouts on the policy.

10) The McFadden Act grants states the primary right to regulate insurance companies.

11) The National Association of Insurance Commissions (NAIC) examines and regulates insurance companies.

12) Most states maintain a permanent reserve fund to resolve insurance company failures.

13) The top 10 property and casualty firms underwrite half of all the P&C premiums written.

14) The primary asset for P&C insurers is bonds.

15) Property loss risk is generally easier to estimate than liability loss risk.

16) Liability lawsuits related to asbestos claims are an example of long tail losses.

17) Liability losses are more subject to social inflation than property losses.

18) Insurance companies charge different premiums to people based on preexisting health conditions in order to reduce the adverse selection problem.

19) A whole life insurance policy pays the face value of the contract on death of the policyholder to the beneficiaries.

20) The adverse selection problem arises in situations when the policyholders engage in risky activities that increase the probability of an insurance payoff.

21) Policy reserves are a(n)

A) balance sheet liability.

B) balance sheet asset.

C) separate account item.

D) insurance guarantee fund payment.

E) income statement revenue item.

22) The following type(s) of life insurance policies do not have a savings feature:

A) Term life

B) Whole life

C) Variable life

D) Universal life

E) Both variable life and universal life

23) In property and casualty insurance the combined ratio is equal to \_\_\_\_\_\_\_\_ divided by total premiums written.

A) the sum of the loss ratio plus loss adjustment expenses

B) the sum of the loss ratio plus the expense ratio

C) the operating ratio minus dividends paid to policyholders

D) the nominal ratio plus the real ratio

E) 1 minus the operating ratio

24) The term "variable" in a variable life policy refers to the

A) policyholder's ability to vary the premiums.

B) insurer's ability to vary the rate of return on the policy.

C) variable growth rate of the cash value of the policy.

D) insurer's ability to vary the premiums.

E) the policyholder's ability to cancel the plan.

25) The primary regulator of insurance firms is the

A) NAIC.

B) McCarran-Ferguson Commission.

C) FDIC.

D) state insurance regulator.

E) SEC.

26) Which one of the following statements concerning annuities offered by insurers is not true?

A) Interest on annuities is not taxed until the investor receives the payments.

B) Annuity payments may be fixed or variable.

C) Annuity contributions are not capped by the IRS.

D) Annuities can be deferred or immediate.

E) Annuity payments must cease upon the policyholder's death.

27) An investor has $25,000 that he can invest today. In addition to this amount, he can also invest $12,000 per year for 30 years (beginning one year from now) at which time he will retire. He plans on living for 25 years after he retires. If interest rates are 8 percent, what size annual annuity payment can he obtain for his retirement years? (All annuity payments are at year-end. Round your answer to the nearest dollar.)

A) $64,439

B) $192,501

C) $150,913

D) $161,096

E) $173,488

28) A policyholder wishes to annuitize the cash value of her insurance policy at retirement. She desires an annual payment of $95,000 per year and the cash value is expected to be $1,100,000 at retirement. Approximately how many payments can she expect to receive if annuity interest rates are 5.122 percent?

A) 18

B) 16

C) 14

D) 12

E) 10

29) The largest asset category of life insurers is \_\_\_\_\_\_\_\_ and the largest liability category is \_\_\_\_\_\_\_\_.

A) bonds; separate account items

B) separate account items; current policy claims

C) bonds; policy reserves

D) policy reserves; mortgage loans

E) common stock; dividend reserve

30) The most important federal legislation affecting the regulation of life insurance companies prior to 1999 was the

A) McCarran-Ferguson Act.

B) McFadden Act.

C) Investment Company Act.

D) SEC Act.

E) Insurance Freedom Act.

31) Which of the following statements are true?

I. Catastrophe bonds may be used as a form of reinsurance.

II. Catastrophe bonds are structured so that if an insured event results in large losses for an insurer, the bond's required payments increase.

III. Buyers of catastrophe bonds benefit if the adverse event occurs.

IV. When issued, catastrophe bonds will have promised yields above the risk-free rate.

A) I and II only

B) I and IV only

C) II and III only

D) II and IV only

E) III and IV only

32) In 2016 the average combined ratio after dividends for the P&C industry was\_\_\_\_\_\_\_\_.

A) 100.01

B) 105.6

C) 107.2

D) 97.6

E) 93.5

33) Hurricane damage in a given area is an example of a \_\_\_\_\_\_\_\_ for which it is difficult to predict loss exposure.

A) low-severity, low-frequency event

B) high-severity, high-frequency event

C) low-severity, high-frequency event

D) high-severity, low-frequency event

E) low-frequency, high-frequency event

34) Property and casualty insurers hold \_\_\_\_\_\_\_\_ short-term assets than life insurers because property and casualty loss rates are \_\_\_\_\_\_\_\_ predictable than life insurance loss rates.

A) more; more

B) more; less

C) less; less

D) less; more

E) no; highly

35) The operating ratio is calculated as

A) the loss ratio minus the underwriting cycle lag.

B) the loss ratio plus the loss adjustment expense ratio plus the commission to premium ratio.

C) the combined ratio after dividends minus the investment yield.

D) the combined ratio minus the loss ratio.

E) none of these options are correct.

36) An insurance line has a loss ratio of 72 percent and an expense ratio of 35 percent, and the firm pays 2 percent of premiums to policyholders as dividends. What level of investment yield is needed to make the P&C firm break even?

A) 5 percent

B) 7 percent

C) 9 percent

D) 11 percent

E) 18 percent

37) The two major components of expense risk for P&C insurers are

A) the combined ratio and the premium ratio.

B) loss adjustment expenses and variations in commission and other expenses.

C) investment yield and premiums earned.

D) dividend ratio and investment yield.

E) none of these options are correct.

38) At P&C insurers, if the combined ratio is less than 100 percent, the premiums charged were sufficient to cover

A) losses only.

B) expenses only.

C) both losses and expenses.

D) losses, expenses, and investment returns on premiums.

39) For P&C insurers, if the combined ratio is more than 100 percent, that firm

A) could not have been profitable.

B) must have been profitable.

C) may have been profitable if investment returns were high enough.

D) was profitable if the LAE was low enough.

40) Estimates of the cost of the September 11, 2001, terrorist attacks on the World Trade Center indicate that the cost to insurance companies was as high as

A) $20 billion.

B) $30 billion.

C) $40 billion.

D) $50 billion.

E) $60 billion.

41) A policyholder wishes to annuitize the cash value of her insurance policy at retirement. The cash value is $725,000. What payment (to the nearest dollar) can he expect if he wishes to receive 15 years of payments (starting next year) and interest rates are 5.25 percent?

A) $43,333

B) $55,555

C) $71,033

D) $60,524

E) $29,250

42) An insurance line has a loss ratio of 62 percent and an expense ratio of 35 percent; the firm pays 2 percent of premiums to policyholders as dividends and has an investment yield to premium ratio of 9 percent. The operating ratio for this line is

A) 86.

B) 90.

C) 95.

D) 106.

E) 109.

43) An insurance line has a pure loss ratio of 65 percent, LAE of 16 percent and an expense ratio of 26 percent; the firm pays 3 percent of premiums to policyholders as dividends and has an investment yield to premium ratio of 6 percent. Which one of the following statements is true?

A) The line is profitable because the operating ratio is greater than 100.

B) The line is profitable because the operating ratio is less than 100.

C) The line is not profitable because the operating ratio is greater than 100.

D) The line is profitable because the combined ratio after dividends is greater than 100.

E) The line is profitable because the combined ratio after dividends is less than 100.

44) In terms of dollar costs, the worst U.S. catastrophe since 2000 was caused by

A) the terrorist attacks on the World Trade Center and the Pentagon.

B) Hurricane Katrina.

C) the California fires of 2007.

D) the Florida hurricanes of 2004.

E) Hurricane Rita of 2005.

45) Premiums received before the coverage period are termed

A) unearned premiums.

B) lagged premiums.

C) loss-adjustment expenses.

D) loss reserves.

E) policyholder's surplus.

46) Which one of the following would provide an example of social inflation?

A) Large malpractice awards beyond the level of damages incurred

B) Increase in costs on auto physical damage claims

C) Increase in prescription drug cost claims

D) Losses to repair damages caused by hurricanes in Florida

E) Rising cost of funeral expenses due to inflation

47) The P&C loss ratio on an insurance line contains

I. payouts on claims.

II. brokerage commissions incurred to market the claims.

III. costs associated with settling claims.

IV. dividend payouts to policyholders.

A) I and II only

B) I, III, and IV only

C) I and III only

D) II and IV only

E) III and IV only

48) The best underwriting performance since 1936 in terms of the combined ratio occurred during \_\_\_\_\_\_\_\_ for property and casualty insurers.

A) 1999 and 2000

B) 2001 and 2002

C) 2002 and 2003

D) 2004 and 2005

E) 2006 and 2007

49) State Farm and other P&C insurers came into conflict with policyholders over claims filed as a result of Hurricane Katrina that resulted in lawsuits. The conflict resulted from

A) insurers' refusal to pay until reinsurance funds were collected.

B) policyholders' fraudulent claims.

C) insurers' insistence that the Katrina storm surge resulted in flood damage that was not covered.

D) insurers overcharging for hurricane insurance.

50) Insurance companies face the problem of \_\_\_\_\_\_\_\_ when people with highest probability of getting the insurance payoffs are the ones who purchase insurance.

A) moral hazard

B) adverse selection

C) fraud

D) over-insurance

E) agency costs

51) How do insurance guarantee funds differ from bank deposit insurance funds?

52) What additional flexibilities are provided by variable and universal life as compared to a standard whole life or endowment policy?

53) A 65-year-old wishes to convert the cash value of his insurance policy into an annuity. He can select an annuity that will last 15 years or one that lasts 20 years. If the cash value is $450,000 and interest rates are 5.25 percent, how much less per year will he receive if he chooses the 20-year annuity?

54) What three main sources of underwriter risk exist for P&C insurers?

55) Why are P&C insurers dependent on investment yields? Is this an argument for changing how this industry operates and/or how we regulate the industry? Explain.

56) What is separate account business? How important is it to life insurers?

57) What are the main lines of P&C insurance?

58)

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| --- | --- | --- | --- | --- | --- |
| Annual Data | Thousands of Dollars | | | | |
| Premiums earned |  | $ | 35,600 |  |  | |
| Losses incurred |  | $ | 26,760 |  |  | |
| Expenses/commissions |  | $ | 9,125 |  |  | |
| Dividends paid to policyholders |  | $ | 600 |  |  | |
| Investment income on premiums |  | $ | 1,525 |  |  | |

What is the combined ratio after dividends for this line? Are premiums sufficient to generate profitability for this line? Why or why not?

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Combined ratio after dividends | = |  | 26,760 + 9,125 + 600 | = | 102.49 | % |
|  |  |  | 35,600 |  |  |  |

59)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Annual Data | Thousands of Dollars | | | | |
| Premiums earned |  | $ | 35,600 |  |  | |
| Losses incurred |  | $ | 26,760 |  |  | |
| Expenses/commissions |  | $ | 9,125 |  |  | |
| Dividends paid to policyholders |  | $ | 600 |  |  | |
| Investment income on premiums |  | $ | 1,525 |  |  | |

What is the operating ratio for this line? Is the line profitable?

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Operating Ratio | = | combined ratio after dividends | − | investment income | = | 102.49% | − | 1,525 | = | 98.20% |
|  |  |  |  | premiums earned |  |  |  | 35,600 |  |  |

60)

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Annual Data | Thousands of Dollars | | | | |
| Premiums earned |  | $ | 35,600 |  |  | |
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| Expenses/commissions |  | $ | 9,125 |  |  | |
| Dividends paid to policyholders |  | $ | 600 |  |  | |
| Investment income on premiums |  | $ | 1,525 |  |  | |

Everything else constant, what is the maximum expected loss ratio that would yield a profitable line after including investment income?

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Max $ Loss + 9,125 + 600 − 1,525 | = | 100 | % | ; | Max | $ | Loss | = | $ | 27,400 |
| 35,600 |  |  |  |  |  |  |  |  |  |  |

61) Halliburton was allowed to bankrupt one of its subsidiaries in settlements of lawsuits on asbestos cases. What are the pros and cons of allowing a firm to limit its liability by shifting the liability to only one subsidiary rather than placing all of the corporation's assets at risk?

62) Why do P&C insurers place a large percentage of their investments in bonds and maintain large surpluses?