

GH CORU Model Solutions

Fall 2014

1. Learning Objectives:

7. The candidate will understand and evaluate Retiree Group and Life Benefits in the United States.

Learning Outcomes:

- (7b) Determine appropriate baseline assumptions for benefits and population.

Sources:

Fundamentals of Retiree Group Benefits, Yamamoto, chapter 9

Commentary on Question:

The question tested the candidate's understanding of how retiree pension and benefit plans are evaluated. The candidate was required to not only list various assumptions used in valuations but was also required to describe how each of the assumptions affects the value of these plans. Candidates who only listed assumptions in part (a) without a description did not receive full credit. Candidates who provided more than one relevant comment about a particular assumption received full credit for that assumption. Part (b) asked the candidate to "identify" assumptions so a list was acceptable. Candidates who correctly identified 8 additional assumptions received full credit for part (b).

Solution:

- (a) Outline and describe four common assumptions used for valuing both pension and retiree group benefits.
 1. Inflation
 - Base for all other economic assumptions
 - General inflation over last 50yrs averaged 3.0 to 3.5 percent
 2. Discount Rate
 - Used to discount future benefit payments in PV calculation
 - Accounting discount rates typically 2 to 4 percentage points above inflation
 3. Salary Increase
 - Used to project benefits at retirement for salary based pension plans
 - Pension and other Benefit Plans should use consistent salary assumption
 4. Termination
 - Individuals who terminate employment before retirement are usually not eligible for post-retirement benefits. This reduces the employer's liability.

1. Continued

- Termination rates are typically higher for less-tenured employees who may not care about post-retirement benefits.
- (b) Identify assumptions not discussed in part (a) which impact retiree group benefit plan valuations.
1. Mortality
 2. Disability
 3. Retirement rate
 4. Current retiree plan costs
 5. Current retiree contributions
 6. Retiree contribution increase
 7. Spouse benefits after death of retiree
 8. Projected plan costs (from current costs)

2. Learning Objectives:

4. The candidate will understand how to describe Government Programs providing Health and Disability Benefits in the U.S.

Learning Outcomes:

- (4a) Describe benefits and eligibility requirements for:
 - (i) Medicare, including Part D
 - (ii) Social Security, including disability income
 - (iii) Medicaid

Sources:

Sources for this question include Bluhm (Group) Chapters 13 and 33 & Kongsveldt Chapter 25.

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Budget constraints mean the state must trim the costs of the program for 2015.
 - (i) Identify general approaches to reduce overall program costs.
 - (ii) Identify one specific action the State of Bliss could take for each strategy.

Commentary on Question:

One grading point was given for up to four areas to target. One grading point was given for up to four specific actions.

<u>Area to target</u>	<u>Specific Action</u>
Cover Fewer people	Make eligibility requirements for medically needy less extensive
Cut benefits	Remove coverage for eyeglasses, adult dental, and prosthetic devices
Manage care	MCO's, care management ACO
Change reimbursement	DRG for hospitals, bundled payments lower fee schedule

- (b) Determine the most cost efficient of the three options (including the status quo) based solely on changing the reimbursement for office visits. Show your work.

2. Continued

Commentary on Question:

The sample solution shows a total cost calculation, but other correct approaches (such as PMPM costs) were also given full credit. Partial credit was given for setting up the problem correctly but making calculation errors. Some candidates neglected to make a recommendation at all, losing 2 points.

Current program (2 grading points): **\$77,962,500** (visits per 1000 * 1000 members * \$ per visit)

Fee Schedule (4 grading points): **\$64,968,750** ([high/medium/low distribution % * dollars] * 1000 members * \$ per visit)

Medicare (8 grading points): **\$63,545,610**

Geo adjust unit = geo factor * visit type => 4 grading points

High = 1.783, Medium = 1.263, Low = 0.917

Adjusted cost / service = geo adjust unit * conversion factor => 2 grading points

High = 56.83, Medium = 40.26, Low = 29.23

Total calculation = distribution (15%/30%/55%) * adjusted cost / service * 1000 members * \$ per visit => 2 grading points

Medicare is the least costly. (2 grading points)

- (c) Discuss the potential repercussions of reducing office visit reimbursements.

Commentary on Question:

When candidates combined recall with using the information they received full credit.

Lower provider payments restrict access to primary care providers and specialists as well as centers of excellence.

Limiting primary care services means more Emergency Room use.

Members who do not receive care will not have management of chronic conditions, ultimately increasing costs.

- (d) Compare the eligibility criteria of the following, given that the legislature has opted to expand Medicaid under the ACA.
- (i) Medically needy
 - (ii) Categorically needy
 - (iii) ACA expansion population

Commentary on Question:

This was a recall question. Most candidates did well.

2. Continued

- (i) Medically needy – medical expenses reduce income below defined limits (1 grading point)
- (ii) Categorically needy – children, parents or other caregivers with dependent children, pregnant women, individuals with disabilities, seniors (maximum 2 grading points)
- (iii) ACA expansion population – at least 133% of federal poverty level and eliminated categories of eligibility (1 grading points)

3. Learning Objectives:

6. Evaluate the impact of regulation and taxation on companies and plan sponsors in the U.S.

Learning Outcomes:

- (6a) Describe the regulatory and policy making process in the U.S.
- (6b) Describe the major applicable laws and regulations and evaluate their impact.

Sources:

Bluhm, *Group Insurance*, chapter 3; Bluhm, *Group Insurance*, chapter 17

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) List and describe the triple aim of U.S. health policy.

Commentary on Question:

Candidates generally performed well on this section. To receive full credit, candidates needed to identify all three aims, and also describe each one with a sentence or two. Some candidates simply listed the three aims, which received partial credit.

1. Better care for individuals - This aim centers on quality and access for individuals
 - Several organizations focus on quality: The Agency for Healthcare Research and Quality (AHRQ), National Quality Forum (NQF), NCQA
 - Institute of Medicine's report lists six characteristics of health care performance:
 - Safe
 - Effective
 - Patient-Centered
 - Timely
 - Efficient
 - Equitable
 - Access refers to the ability to purchase insurance; access is improved via the creation of Health Benefit Exchanges in each state
2. Better health for populations – Public health initiatives should focus on:
 - Environmental Factors – sanitized water, pollution, violence, unhealthy living environment, access to fresh/healthy foods
 - Community Disease Prevention – childhood immunization requirements, free or reduced flu shots, free or reduced preventive screenings

3. Continued

- Lifestyle – obesity leads to chronic diseases, healthy school lunches, anti-smoking laws
 - Socioeconomic Factors – Higher stress for low income families, implementation of programs like Medicaid
 - Wellness and Disease Management (DM) Solutions – includes employer strategies around wellness and disease prevention
3. Lower per capita cost – Goal is to reduce cost, can be measured by the percentage of the GDP of a country that is represented by health expenditures
- US stands out among other countries in terms of the substantially higher portion of GDP taken up by health.
 - Healthcare should be affordable for employers and individuals
- (b) Identify which aim the Affordable Care Act (ACA) best targets. Explain how specific components of the ACA address this aim. Defend your answer.

Commentary on Question:

Candidates had more difficulty on this part. First, candidates needed to choose one aim and justify their answer. Some candidates listed all three aims and portions of the Affordable Care Act that supported each aim, which did not sufficiently answer the question. For the candidates that did pick a single aim in their response, some simply listed various components of the Affordable Care Act, without tying them back to the aim that they had identified. Candidates should be advised that credit is only given for the components of the ACA that are relevant here.

The triple aim best targeted by the ACA is better care for individuals, and specifically the objective of increasing access. The following components of the ACA support this aim:

1. Health Benefit Exchange (HBE) – primary function is to facilitate the purchasing of insurance by allowing consumers to find, compare and purchase insurance from multiple companies in a single online source.
 - Benefits – plans must cover essential health benefits, must have an out-of-pocket limit at or below the Health Savings Accounts limit, and must fall into one of the metallic tiers
 - Risk Pool – individuals and small group enrollees are each considered as a single risk pool
 - Guaranteed Issue/Removal of Pre-Existing Conditions – coverage in the individual market is now guaranteed issue, with no ability to deny or rate based on pre-existing conditions

3. Continued

2. Incentives to purchase through an HBE
 - Small Employers – tax credit on health insurance premiums.
 - Individuals – government will provide premium and cost sharing subsidies to low income individuals who buy through an exchange.
 - Premium subsidy – Tied to second-lowest cost silver plan in the area and set on a sliding income scale for people with incomes between 133%-400% of FPL.
 - Cost sharing subsidy – Helps with out-of-pocket expenses such as deductibles, copays and coinsurance for people with incomes between 100%-250% of FPL enrolled in a Silver level plan

3. Medicaid Expansion – States have the option to expand Medicaid to all non-Medicare eligible individuals with incomes up to 133% (or 138%) of FPL.
 - States were to receive supplemental federal funding to support this expansion.
 - Quality improvement in Medicaid – payments for primary care services will increase to 100% of Medicare rates, and the increase will be federally funded.

4. Learning Objectives:

7. The candidate will understand and evaluate Retiree Group and Life Benefits in the United States.

Learning Outcomes:

- (7b) Determine appropriate baseline assumptions for benefits and population.
- (7c) Determine employer liabilities for retiree benefits under various accounting standards.

Sources:

Textbook: Fundamentals of Retirees Group Benefits (by Yamamoto), Chapter 7.

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Describe the key components of the net periodic postretirement benefit cost.

Commentary on Question:

Candidates must provide sufficient support for each of the components included in the Net Periodic Post-Retirement Benefit Cost in order to obtain full marks. No marks are given to candidates who only provided a list of the components.

- Service cost – the cost of the benefits that accrue during the period for the P&L statement
 - Interest cost – interest on items like APBO, service cost, and benefit payments
 - Expected return on plan assets – expected fair market value of return on plan assets in the plan year
 - Amortization of the transition obligation – if employer chose to delay and amortize one-time impact of FAS 106
 - Net amortization and deferral – amortization for prior costs
 - Net amortization and deferral – amortization for plan gains/losses
- (b) List and describe eight actuarial assumptions used for valuation of life and health group benefit plans.

Commentary on Question:

Candidates must provide sufficient support for each actuarial assumption in order to obtain full marks. No marks are given to candidates only provided a list of the components.

Note, the actuarial assumptions must pertain to the post-retirement benefit valuation.

4. Continued

- Discount rate – used to discount all future benefit payments in any present value calculation.
 - Health care cost trend rate – the rate used to project current claims costs into the future.
 - Salary increase – used to project the salary to retirement for salary-based benefits such as Life insurance.
 - Termination – used for current active employees who are expected to leave the employer prior to retirement.
 - Mortality – generally not significant until after retirement
 - Retirement rate – likelihood of retirement upon attainment of eligibility
 - Current plan costs and contributions – the costs by age for a retiree
 - Retiree contribution increase – if contributions are required, assumption for future increases
- (c) Calculate DL's net periodic postretirement benefit cost for 2014. Show your work.

Commentary on Question:

Candidates must show all work in order to obtain full marks. Candidates must also provide sufficient support to any assumptions (not provided as part of the question) used in the calculation.

NPPB Cost = Service Cost + Interest Cost + Net Amortization and Deferral

Service cost = \$40,000

Interest Cost = (APBO + Service Cost) x Plan Discount Rate – Expected Plan Payments / 2 x Plan Discount Rate
= (\$590,000 + \$40,000) x 5% - \$10,000 / 2 x 5% = \$31,250

Assume plan is not a funded plan – no expected return on asset

Total Unrecognized (Gain)/Loss = \$27,000

However, since 10% of APBO (\$59,000 = 10% x \$590,000) is greater than the Total Unrecognized (Gain)/Loss, no amortization is required for 2014.

NPPB Cost
= Service Cost + Interest Cost + Net Amortization and Deferral
= \$40,000 + \$31,250 + \$0 = \$71,250

4. Continued

- (d)
- (i) Discuss possible reasons for the increase in APBO.
 - (ii) Calculate the revised net periodic postretirement benefit cost for 2014. Show your work.

Commentary on Question:

It is important to notice that the information provided in this sub-question is based on a new valuation as at January 1, 2014. The information provided under the main question portion is the roll-forward result based on a previous valuation.

Candidates must show all work in order to obtain full marks. Candidates must also provide sufficient support for any assumptions (not provided as part of the question) used in the calculation

- (i) The roll-forward valuation assumes a stable population and assumption from year to year. Therefore, the increase in APBO from the new valuation could be a result of the following:
 - The active population may not have terminated at the rates being assumed since the last valuation (termination rate)
 - The company may be in growth mode, adding more active associates than those who leave, creating a net increase in covered population
 - Actual health care trend rates are higher than expected leading to a change in trend rate assumption
 - Expected claims costs used in the previous valuation are lower than actual claims costs
- (ii) NPPB Cost = Service Cost + Interest Cost + Net Amortization and Deferral

Service cost = \$53,000

Interest Cost

= (APBO + Service Cost) x Plan Discount Rate – Expected Plan Payments / 2 x Plan Discount Rate

= (\$670,000 + \$53,000) x 5% - \$12,000 / 2 x 5% = \$35,850

Total Unrecognized (Gain)/Loss

= unamortized (gain)/loss from previous valuations + new loss on APBO

= \$27,000 + (\$670,000 - \$590,000) = \$107,000

4. Continued

$$10\% \text{ of APBO} = \$67,000$$

Therefore:

$$\text{Amortization} = (\$107,000 - \$67,000) / 9 \text{ years} = \$4,444$$

NPPB Cost

$$= \text{Service Cost} + \text{Interest Cost} + \text{Net Amortization and Deferral}$$

$$= \$53,000 + \$35,850 + \$4,444 = \$93,294$$

- (e) You receive a call from the Retiree Benefits Manager at DL who is forecasting a budget for 2015. She is particularly concerned with the discount rate risk, as it has recently been volatile on a month-to-month basis.

Describe the expected impact on the components of the net periodic postretirement benefit cost if the discount rate at December 31, 2014 decreases by 50 basis points.

The lower discount rate will impact the following components of the NPPBC:

- Service cost – the lower discount rate will increase the service cost, as the present value of future benefits increases
- Interest cost – the lower discount rate may or may not increase the interest cost as the APBO and service cost both increase, but the discount rate being applied to these items decreases
- Net amortization and deferral – amortization for plan gains/losses – as the plan's unrecognized losses are already outside the corridor, exactly one-ninth of the loss arising due to the discount rate decrease will be included in the following year's expense, unless there are offsetting actuarial gains
- Expected return on plan asset – no impact

5. Learning Objectives:

6. Evaluate the impact of regulation and taxation on companies and plan sponsors in the U.S

Learning Outcomes:

- (6a) Describe the regulatory and policy making process in the US
- (6b) Describe the major applicable laws and regulations and evaluate their impact
- (6c) Apply applicable standards of practice

Sources:

GHC-802-13: AAA Health Care Reform Implementation: Understanding the Terminology

GHC-803-13: Amicus Curiae

GHC-804-13: NAIC Letter

GHC-805-13: Issue Brief

Group Insurance, Bluhm, 6th Edition

- Chapter 17: Health Exchanges and Connectors (Pages 273-275)

ASOP 8

ASOP 41

Commentary on Question:

Candidates generally met expectations when responding to all parts of this question. For part (b) some candidates only stated the three R's and missed other ACA provisions established to mitigate pricing risk.

Solution:

- (a) Describe the pricing risks and the implications of these risks when considering offering an individual plan on the exchange.

Commentary on Question:

Most candidates received points on this question by mentioning some combination of under/over pricing and/or adverse selection. However, some candidates misunderstood the question and spoke about the different pricing methodologies and rating restrictions that would apply in the ACA environment. No points were awarded for listing ACA rating restrictions. Candidates were expected to understand the impact these (and other) changes would have on BMI in an environment of uncertainty.

5. Continued

1. What it is: Insurers generally lack detailed data and experience regarding health spending for the uninsured.
 - Implication: Under or over pricing premiums
 2. What it is: Understating premiums (price too low)
 - Implication: Could result in large losses to private insurers, threatening plan solvency.
 - Implication: Adverse selection – sicker members join the plan
 3. What it is: Overstating premiums (price too high)
 - Implication: Could result in large gains to the insurers and/or reduce participation in the plan. Lower membership might not be enough to offset fixed administration costs.
 - Implication: Adverse selection – healthier members leave the plan
 4. Both under and over pricing can lead to adverse selection
 - Adverse Selection – where individuals with higher expected medical needs are more likely to purchase coverage, thus skewing insurance risk pools.
- (b) List and explain ACA provisions established to mitigate pricing risks that Buy My Insurance is facing with this new product.

Commentary on Question:

Most candidates immediately listed and described the 3 R's. However, a lot of candidates failed to identify additional ACA provisions that help mitigate pricing risks, such as MLR requirement, incentives to encourage individuals' participation on the exchange, and standardization of plan designs and rating rules to minimize antiselection.

Some candidates only noted down the 3 R's with a brief explanation, but failed to elaborate on how this provision mitigates risk. Good candidates remembered to mention the purpose and goal of each risk sharing program.

Candidates received a little more than half credit for the 3 R's and the remaining points were awarded on the detail provided for bullet points 4 through 6. Candidates were awarded no points for just listing the provision without an explanation.

1. Risk Adjustment – Permanent Program beginning in 2014. Used to redistribute total payments across health plans to account for the relative risk of plan participants.
 - Payments will flow from plans that disproportionately enroll low-risk individuals to those that enroll a greater percentage of high-risk individuals.

5. Continued

- Helps ensure that health plans are appropriately compensated for the risks they enroll but it is unlikely to compensate health plans perfectly for their risk mix differences.
 - Helps make payments to competing plans more equitable and can reduce the incentives for competing plans to avoid individuals with higher-than-average health care needs.
 - It can reduce the effects of adverse selection between plans because risk adjustment transfers funds between plans based on the relative risk of their enrollees.
2. Reinsurance: limit insurers' downside risk (cover large-claimants)
 - Mitigate financial loss risk and further reduce the incentives for competing plans to avoid individuals with expected high claims.
 - Goal is to stabilize premiums in the individual market during the first three years, 2014 through 2016, that health insurance exchanges are operational.
 - This is a supplement program to the risk adjustment since typically risk adjustment is not able to compensate plans fully for unusually high claims.
 3. Risk Corridors: Provide a government subsidy if insurer losses exceed a certain threshold while on the other hand, limit an insurer's gain – plans would pay the government if their gains exceed a certain threshold.
 - Mitigate risk that insurers face when their data on health spending for potential enrollees are limited.
 - ACA contains symmetric risk corridors: come within +/- 3 percent of the target, the plan bears the loss or keeps the gains.
 - Temporary for the first three years, 2014 through 2106, until data becomes available on the health spending patterns of the newly insured.
 4. Encouraging Participation in the HBE
 - Individual Mandate: The ACA requires that all individuals, with a few exceptions, have health insurance coverage or they must pay a financial penalty.
 - Maximize the number of participating carriers and consumers through the individual mandate to enroll a broad cross section of risks to avoid the higher average premiums associated with adverse selection.
 - Without the penalty, there is more exposure to antiselection as less healthy people choose to purchase insurance through HBEs and more healthy people may choose to not purchase coverage at all.
 - Premium subsidies and cost sharing subsidies available to lower income individuals who enroll in HBE plans.
 - Tax credits available to small businesses that participate in the HBE.

5. Continued

5. Plan design and pricing rules that will mitigate antiselection because they apply to plans both inside and outside the HBE.
 - Must cover at least the essential health benefits.
 - Cannot offer plans more lean than bronze or catastrophic inside or outside the HBE.
 - Prohibitions on lifetime and annual benefit limits, and on pre-existing condition exclusions.
 - Requirement to use adjusted community rate.
 - Offer the same premium rates in or out of the HBE.
 6. Medical Loss Ratio: Share of premiums that a health insurer spends on medical benefits vs. the share spend on administration costs
 - Requires $\geq 80\%$ for individual market.
 - Mitigate the risk of insurers overpricing.
- (c) Outline key elements required in the actuarial rate filing memorandum based on ASOP 8.

Commentary on Question:

This was a straight forward listing question. Even candidates who did not do well on parts (a) and (b) managed to do well on this part. A few candidates confused ASOP 8 with ASOP 41 (Communication & Disclosures). On some occasions, candidates spent a lot of time explaining the type of assumptions, without hitting the other aspects of ASOP 8.

1. Purpose/Scope of the filing
2. Assumptions such as premium levels, covered lives, trends in morbidity, mortality and lapses, non-benefit expenses, taxes, and profit.
3. Reasonableness of Assumptions
4. Rating Calculations
5. Rating Factors
6. Use of Business Plans to Project Future Results
7. Use of Past Experience to Project Future Results
8. New Plans or Benefits
9. Projection of Future Capital and Surplus
10. Applicable Laws
11. Regulatory Benchmark
12. Reliance on Data supplied by others (ASOP 23)
13. Communication and Disclosures (ASOP 41)

6. Learning Objectives:

5. The candidate will understand how to prepare and interpret insurance company financial statements in accordance with U.S. Statutory Principles and GAAP.

Learning Outcomes:

- (5c) Interpret the results of both statutory and GAAP statements from the viewpoint of various stakeholders, including regulators, senior management, investors.

Sources:

Higgins, Chapter 4

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Discuss how a company can “grow broke” and related actions to avoid this peril.

Commentary on Question:

This came directly from the text and most candidates were able to discuss this.

Growing broke can occur if a company’s growth outpaces their sustainable growth rate.

If growth outpaces the sustainable growth rate, actions need to be taken to raise the sustainable growth rate by improving the profit margin, asset turnover, or financial leverage.

Alternate solution – other acceptable actions:

- Sell new equity
- Increase financial leverage
- Reduce the dividend payout
- Prune away marginal activities
- Outsource some or all of production
- Increase prices
- Merge with a “cash cow:

(b)

- (i) Calculate the 2014 sustainable and actual growth rates. Show your work.
- (ii) Describe the impacts on the balance sheet of your findings.

6. Continued

Commentary on Question:

- (i) Candidates often used revenue instead of sales in the calculation of the actual growth rates, profit margin and asset turnover. Another common error was to use the end-of-period equity in the calculation of Assets-to-Equity rather than beginning-of-period.
- (ii) Few candidates recognized balance sheet items in their response. Those that did recognize the balance sheet items did not “describe” the impact on them of growth exceeding the sustainable growth rate.

- (i) Joey Bats’ actual growth rate for 2014:
 $= 2014_Sales / 2013_Sales - 1 = 19,621 / 12,954 - 1 = 51.4\%$

Joey Bats’ sustainable growth rate for 2014:
 $= (2014 \text{ equity} - 2013 \text{ equity}) / (2013 \text{ equity}) = (3,475 - 2,467) / 2,467 = 40.9\%$
(note that Joey Bats retains 100% of earnings)

OR an alternative approach for Joey Bats’ sustainable growth rate for 2014:

Sustainable growth rate = Profit margin x Retention rate x Asset Turnover x Assets-to-Equity ratio (with equity being beginning-of-period).

- Profit margin: Net income/Sales = 1,008 / 19,621
- Retention rate = 100% (implied from balance sheet)
- Asset turnover: Sales/Assets = 19,621/6,837
- Assets-to-Equity ratio (with equity being beginning-of-period) = 6,837/2,467
- $g^* = 1,008 / 2,467 * 100\% = 40.9\%$

- (ii) The consequences of this are highlighted in the financial statements in the following areas:
- a. Cash reserves have decreased which puts the company at a higher risk of insolvency.
 - b. Accounts receivable turnover has increased presumably because the increase in growth has made it more challenging to collect on monies owed.
 - c. Accounts payable has increased presumably because the cash reserves have decreased making it more difficult to pay off debt quickly.

- (c) Discuss why corporations do not, in general, issue more equity.

Commentary on Question:

This question came directly from the text and most candidates were able to discuss this.

6. Continued

Reasons why corporations do not issue equity:

- For many companies, new equity is not needed.
- Equity is expensive to issue.
- Management can have fixations with earnings per share.
- “Market doesn’t appreciate us” syndrome. Management may feel their company is undervalued.
- Many managers view the stock market as an unreliable funding source.

- (d) Explain why the reasons from (c) may or may not apply to Joey Bats.

Commentary on Question:

Candidates were expected to explain how their response in (c) specifically applies to Joey Bats based on the facts given. Most candidates simply repeated their responses from section (c) in this section and either did not provide explanation or gave hypotheticals.

These reasons do not necessarily apply to Joey Bats because it is a relatively new company looking to grow. The equity instruments that young companies issue are occasionally referred to as “story paper” by brokers, which refer to potentially high-growth enterprises with a particular product or concept that brokers can hype to receptive investors – i.e. this is an advertising opportunity.

7. Learning Objectives:

4. The candidate will understand how to describe Government Programs providing Health and Disability Benefits in the U.S.

Learning Outcomes:

- (4a) Describe benefits and eligibility requirements for:
 - (i) Medicare, including Part D
 - (ii) Social Security, including disability income
 - (iii) Medicaid

Sources:

Group Insurance Chapter 13 Kongsveldt Chapter 25 Medicaid Managed Care

Commentary on Question:

This question came directly out of the reading material. Most people understood the role of poverty and many understood that lack of coordination of services for beneficiaries would lead to less than optimal outcomes, but beyond that there was not a good understanding demonstrated of the reading material.

Solution:

- (a)
 - (i) List social determinants which negatively affect health.
 - (ii) Describe how the two primary determinants affect the target population.
 - (i) Social Determinants include
 - Poverty
 - Health literacy (comp, language cultural diversity ethnicity)
 - Gender bias
 - Racial bias
 - Complex health care needs
 - Unemployment
 - (ii) Poverty – single largest factor contributing to poor health outcomes, with a direct correlation between poverty level and health outcomes

Examples -- poor housing and crowded living conditions, limited access to adequate and nutritious food, personal safety issues, limited access to technology such as telephone and the Internet {which is widely used for dissemination of information}, and suboptimal primary and secondary education, all of which may lead to poor health status and outcomes.

7. Continued

Health literacy -- the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions" or value-based health decisions.

Those with limited health literacy:
report poorer health status, are less likely to use preventive care, are less likely to comply with treatment regimens, are more likely to use more costly services, are less likely to do self-care, and lack the skills to navigate the health care system.

- (b) List dual eligible benefits and identify which are paid by Medicare or by Medicaid.

Medicare pays for IP Hospital, OP Hospital, Physician, SNF (short term).
Medicaid pays for Long Term Care, Benefits such as dental or non-emergent transport that aren't covered by Medicare.
Medicaid pays for Cost share and premiums.

- (c)
- (i) Explain how acute care services delivered to dual eligibles in a non-integrated program result in limited cost savings.
- (ii) Describe how this affects the care delivered to the beneficiary.
- (i) Acute care non-integrated will have problems because
- Uncoordinated treatment of multiple chronic conditions
 - No incentive to provide care in the most appropriate setting, such as community-based care
 - Results in duplicate or unnecessary tests or procedures
 - Lack of coordination results in avoidable emergency room visits and inpatient admissions or readmissions for ambulatory sensitive conditions
- (ii) In general uncoordinated care causes problems because:
- Often people don't become eligible for Medicaid until admitted to hospital
 - Typically an inpatient admission (Medicare responsible) followed by a transition to nursing home (Medicaid)
 - People deplete resources to qualify for Medicaid
 - Both Medicare and Medicaid are managed in silo structure, with little incentive to help the other one save money

7. Continued

- No incentive for Medicare and Medicaid to support transition for individuals back to the community
- (d) Describe why the state of Euphoria might not want to switch to an integrated approach.

Medicare gets most of the savings not the state.

Startup costs will be high and the savings will take longer to accrue the state through Medicaid savings

No easy waiver process to develop an integrated program (example – Massachusetts SCO)

Administrative burden will be large with the two programs to join together

8. Learning Objectives:

5. Understand how to prepare and be able to interpret insurance company financial statements in accordance with US Statutory Principles and GAAP

Learning Outcomes:

- (b) Prepare financial statement entries in accordance with generally accepted accounting principles
- (c) Interpret the results of both statutory and GAAP statements from the viewpoint of various stakeholders, including regulators, senior management, investors

Sources:

Analysis for Financial Management, Higgins, 10th Edition

- Ch. 3 Financial Forecasting

Group Insurance, Bluhm, 6th Edition

- Ch. 45 Analysis of Financial and Operational Performance

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Describe three ways to cope with uncertainty in financial forecasts.

Commentary on Question: *Candidates tended to either provide all three ways or none. While full credit wasn't provided for merely listing the three ways, candidates who correctly provided the three ways generally described them sufficiently to earn full credit.*

- Sensitivity Analysis – Measuring financial impact by changing one key assumption at a time and reviewing the results
- Scenario Analysis – Measuring financial impact by changing several key assumptions related to a possible scenario at a time and reviewing the results
- Simulation – Running thousands of simulations of assumptions as random variables using a computer, measuring financial impact, and reviewing the results

- (b) Prepare a revised 3-year financial pro forma making the following revisions to the initial projection:

- (i) (2 points) Income Statement
- (ii) (4 points) Balance Sheet

Show your work.

8. Continued

Commentary on Question: Candidates generally did well on this section. To earn full credit, candidates needed to show work by providing formulas (either numbers or fields used) for calculations used for at least one of the three years per item on the income statement.

Most candidates struggled with two major pieces of this section. The first was the application of retained earnings. Earnings are retained every year, even when there are net losses. Additionally, retained earnings are cumulative throughout the years on the balance sheet. The second major issue was that after applying the specified adjustments, candidates should have identified that assets did not equal the sum of liabilities and equity, and that the cash and securities asset should have been adjusted accordingly for this balance. To earn full credit, candidates needed to show work by providing formulas (either numbers or fields used) for calculations used for at least one of the three years per item on the balance sheet.

(i) Income Statement

	2015	2016	2017
Net Premium Income	\$108,000	\$108,000	\$108,000
Expenses			
Claims	95,040	92,880	91,800
Operating Expenses	<u>16,200</u>	<u>12,960</u>	<u>11,880</u>
Total Earnings before tax	(3,240)	2,160	4,320
Taxes (40%)	<u>0</u>	<u>864</u>	<u>1,728</u>
Earnings after taxes	(\$3,240)	\$1,296	\$2,592

Claims = Revenue x Projected Claims Loss Ratio

2015 Claims = \$108,000 x 88% = \$95,040

2016 Claims = \$108,000 x 86% = \$92,880

2017 Claims = \$108,000 x 85% = \$91,800

Operating Expenses = Revenue x Operating Expenses Ratio

2015 Operating Expenses = \$108,000 x 15% = \$16,200

2016 Operating Expenses = \$108,000 x 12% = \$12,960

2017 Operating Expenses = \$108,000 x 11% = \$11,880

Taxes = Tax rate x Max(\$0, Total Earnings Before Tax)

2015 Taxes = 40% x Max(\$0, -\$3240) = \$0

2016 Taxes = 40% x Max(\$0, \$2160) = \$864

2017 Taxes = 40% x Max(\$0, \$4320) = \$1,728

8. Continued

Balance Sheet (\$ in 000's)

	12/31/2015	12/31/2016	12/31/2017
<u>Assets</u>			
Current Assets			
Cash and Securities	\$20,745	\$20,026	\$19,953
Accounts Receivable	2,160	2,160	2,160
Prepaid Expenses	405	324	297
Other Current Assets	-	-	-
Total Current Assets	23,310	22,510	22,410
Net Fixed Assets	5,000	5,000	5,000
Total Assets	28,310	27,510	27,410
<u>Liabilities and Owner's Equity</u>			
Current Liabilities			
Claims Unpaid	\$13,500	\$13,500	\$13,500
Accounts Payable	1,620	1,296	1,188
Other Current Liabilities	-	-	-
Total Current Liabilities	15,120	14,796	14,688
Long Term Debt	4,000	3,200	2,560
Common Stock	10,000	10,000	10,000
Retained Earnings	(810)	(486)	162
Total Liabilities and Owner's Equity	\$28,310	\$27,510	\$27,410

Accounts Receivable = 2% x Premium

2015/2016/2017 Accounts Receivable = 2% x \$108,000 = \$2,160

Prepaid Expenses = 2.5% x Operating Expenses

2015 Prepaid Expenses = 2.5% x \$16,200 = \$405

2016 Prepaid Expenses = 2.5% x \$12,960 = \$324

2017 Prepaid Expenses = 2.5% x \$11,880 = \$297

Unpaid Claims = 1.5 / 12 x Annual Premium

2015/2016/2017 Unpaid Claims = 1.5 / 12 x \$108,000 = \$13,500

Accounts Payable = 10% x Operating Expenses

2015 Accounts Payable = 10% x \$16,200 = \$1,620

2016 Accounts Payable = 10% x \$12,960 = \$1,296

2017 Accounts Payable = 10% x \$11,880 = \$1,188

8. Continued

Retained Earnings (year_y) = Retained Earnings (year_{y-1}) + 25% x Earnings After Taxes

2015 Retained Earnings = 0 + -\$3,240 x 25% = -\$810

2016 Retained Earnings = -\$810 + \$1,296 x 25% = -\$486

2017 Retained Earnings = -\$486 + \$2,592 x 25% = \$162

Cash and Securities = Total Liabilities and Owner's Equity – Net Fixed Assets – Other Current Assets - Prepaid Expenses – Accounts Receivable

2015 Cash and Securities = \$28,310 – 5,000 – 0 – 405 – 2,160 = \$20,745

2016 Cash and Securities = \$27,510 – 5,000 – 0 – 324 – 2,160 = \$20,026

2017 Cash and Securities = \$27,410 – 5,000 – 0 – 297 – 2,160 = \$19,953

- (b) Calculate the following 12/31/2017 profit measures for Year 3, for both the initial 3-year pro forma statement and the pro forma you created in (b). Show your work and define the terms.

Commentary on question: *Shareholder equity, which is used in the calculation of return on equity, is the sum of just common stock and retained earnings. Many candidates included long-term debt as a part of shareholder equity instead of correctly defining it as a liability. Some candidates only provided the calculation for either the initial statement provided in the problem or the pro forma statement created in (b) but not both. Other candidates incorrectly used pre-tax earnings to calculate the profit measures. Another common mistake was that candidates calculated return on equity using shareholder equity at the start of the year instead of at the end of the year.*

1. Return on equity

Shareholder Equity = Common Stock + Retained Earnings

Return on Equity = Net Income After Tax / Shareholder Equity

	Initial Statement	Revised Statement
Shareholder Equity	\$10,000 + \$6,215 = \$16,215	\$10,000 + \$162 = \$10,162
Return on Equity	\$9,423 / \$16,215 = 58.1%	\$2,592 / \$10,162 = 25.5%

8. Continued

2. Return on assets

Return on Assets = Net Income After Tax / Total Assets

	Initial Statement	Revised Statement
Return on Assets	$\$9,423 / \$39,976 = 23.6\%$	$\$2,592 / \$27,410 = 9.5\%$

3. Profit margin

Profit Margin = Net Income After Tax / Total Revenue

	Initial Statement	Revised Statement
Profit Margin	$\$9,423 / \$157,048 = 6.0\%$	$\$2,592 / \$108,000 = 2.4\%$

9. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
 - a. Group and individual medical, dental and pharmacy plans
 - b. Group and individual long-term disability plans
 - c. Group short-term disability plans
 - d. Supplementary plans, like Medicare Supplement
 - e. Group and Individual Long Term Care Insurance

5. The candidate will understand how to prepare and interpret insurance company financial statements in accordance with U.S. Statutory Principles and GAAP.

Learning Outcomes:

- (1c) Describe each of the coverages listed above.

- (5b) Prepare a financial statement in accordance with generally accepted accounting principles.

Sources:

USGAAP for Life Insurers, Chapter 10 and FAS60 note

Commentary on Question:

In general candidates did well on the first section of the question and had mixed results for the second section of the question. Please see section specific comments.

Solution:

- (a) Describe how renewability impacts each of these policies.

Commentary on Question:

The majority of candidates did well on this question. To receive full credit supporting statement(s) were required around pricing/risk as it related to the renewability provision.

Noncancellable: can't cancel policy and can't increase premium, of the three this puts the most pressure on the initial rate determination

Guaranteed Renewable: can't cancel policy but can increase premium rates under certain conditions (regulatory approval, adverse morbidity experience)

Optionally Renewable: may cancel policy on renewal and increase premiums on renewal, of the three this places the least emphasis on initial rate setting and underwriting.

- (b) Describe the applicability, under FAS 60, of the following items for each of New Albanian's disability products:
 - Accrued experience refunds
 - Active life reserves

9. Continued

- DAC reserves
- Maintenance expense reserves
- Premium deficiency reserves
- Unearned premium reserves
- Unpaid claims adjustment expense

Commentary on Question:

Candidate performance varied considerably on this part of the question. Candidates were expected to identify the applicability as related to each type of policy, and provide a supporting explanation. To receive full credit candidates were not expected to perfectly answer all seven parts, but were required to demonstrate adequate knowledge of the subject.

	Indiv. DI	Grp LTD	Grp STD
Accrued experience refunds	N	Y	Y
Active life reserves	Y	Y/N	N
DAC reserves	Y	N	N
Maintenance expense reserves	Y	N	N
Premium deficiency reserves	Y	Y	Y
Unearned premium reserves	Y	Y	Y
Unpaid claims adjustment expense	Y	Y	Y

- Accrued experience refunds: if NAHIC policies have experience refund provision, FAS 60 would require a reserve be held. Provision usually only available with group policies.
- Active life reserves: Need for active life reserves depends on prefunding of benefits. The level premium of individual DI products clearly indicates a need for active life reserves, while the STD is unlikely to have this type of reserve. And group LTD falls somewhere in between.
- DAC reserves: Acquisition costs are usually high in individual DI in the initial year. Capitalization and deferral of non-level acquisition expenses achieve a spreading of costs in level proportion to gross premium over the lifetime of the contract.
- Maintenance expense reserves: DI claims rise rapidly with age and claims for older ages are more complicated so a reserve needs be held for higher maintenance expenses in later policy years in proportion to claims.
- PDR: Yes, most common for long duration issues. PDR is set up when the gross premium reserve exceeds the sum of benefit reserve, the unearned premium reserve, the claim reserve and deferred profit liability, less DAC.

9. Continued

- UPR: Arises when premium mode is longer than one month or premium not due on first of month.
- Unpaid claims adjustment expense: set in connection with the settlement of unpaid claims. Costs related to claims paid or in process of settlement (costs such as legal/adjustor fees)

10. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
 - a. Group and individual medical, dental and pharmacy plans
 - b. Group and individual long-term disability plans
 - c. Group short-term disability plans
 - d. Supplementary plans, like Medicare Supplement
 - e. Group and Individual Long Term Care Insurance

3. Evaluate and recommend an employee benefit strategy.

Learning Outcomes:

- (1c) Describe each of the coverages listed above.

- (1d) Evaluate the potential financial, legal and moral risks associated with each coverage.

- (3b) Evaluate the elements of cafeteria plan design, pricing and management.

- (3c) Recommend an employee benefit strategy in light of an employer's objectives.

Sources:

Rosenbloom Ch. 7

Commentary on Question:

This question is looking for the key components of HDHP's, as well as comparing/contrasting HSA's and HRA's.

Solution:

- (a) Define the key components of CDHP.
 - High Deductible Health Plan
 - Paired with a savings account (HRA or HSA)
 - Tools to assist members with finding high quality providers at the lowest cost
 - Communications program that encourages consumerism and healthy behaviors
 - Health coach or consultant provided to assist members as needed
 - Health professional to assist with management of chronic conditions

- (b)
 - (i) Describe the characteristics of HRAs and HSAs.

 - (ii) Explain why certain attributes of HSAs make them more popular with employees than HRAs

10. Continued

- (i) HRA's
- Set up by ER
 - EE cannot contribute
 - Does not require use of HDHP
 - No federal income tax limits, ER may set limits
 - Carryover at discretion of ER
 - Not portable
 - Used for qualified medical expenses and health insurance premiums
 - EEs are not taxed on distributions
- HSA's
- Must be used with an HDHP
 - ER and EE can contribute
 - Limits on EE contributions
 - Carryover each year
 - Portable
 - Not used for insurance premiums except in special circumstances
 - EE contributions tax deductible
 - Earns interest, not taxable
 - Distributions not taxed if used for qualified medical expenses, all other subject to 20% penalty and taxed
- (ii) HSA's are preferred because they are portable, can carry over unused each year, EE's can contribute to them, they earn tax-free interest, and they can be used for non-medical expenses.
- (c) Recommend a plan in which each of them should enroll based on the information above. Justify your answer.

Commentary on Question:

There were many candidates who recommended Plan B to Rose because she is a smoker and is more likely to have high claims. If adequate support is given for that recommendation, partial credit is given.

Blanche: Plan A – She is very healthy and low probability of incurring claims, HSA contributions will carryover each year and can grow savings for future claims or even retirement

Dorothy: Claims are \$3,500

Plan A: expenses would be $(3,000 - 1,500) + 500 \times 20\% = \$1,600$ OOP costs

Plan B: expenses would be $(1,000 - 1,000) + 2,500 \times 20\% = \500 OOP costs

Recommend Plan B since OOP costs are lower for her

10. Continued

Rose: Plan A – currently she has very little medical expenses. Preventive care is covered under all plans, and she should see a doctor. She is a smoker and will eventually likely have higher claims. The HSA rollover amounts will allow her to build up money to pay for those future claims.

11. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
 - a. Group and individual medical, dental and pharmacy plans
 - b. Group and individual long-term disability plans
 - c. Group short-term disability plans
 - d. Supplementary plans, like Medicare Supplement
 - e. Group and Individual Long Term Care Insurance
2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

- (1c) Describe the coverages listed above
- (1d) Evaluate the potential financial, legal and moral risks associated with each coverage
- (2e) Identify critical metrics to evaluate actual vs. expected results
- (2f) Describe the product development process including risks and opportunities to be considered during the process.

Sources:

Bluhm Ch 35 Estimating Dental Claims Costs

Bluhm ch 8 Dental Benefits in the US

Commentary on Question:

In general, candidates did well with this question. However, some candidates only provided list responses for (a) and (b), but the question asked for a description in order to receive full marks. Some candidates only provided a counterproposal for (d) when the question asked for next steps in order to make a counterproposal.

Solution:

- (a) Describe common provisions aimed at limiting anti-selection in dental plans.
 - Exclusions: Excludes payment for elective (non-essential) procedures or procedures covered elsewhere. Examples include cosmetic treatments, experimental treatments, and services related to on-the-job accidents
 - Pre-existing conditions limitations/Waiting: Most plans do not cover any charges incurred before a covered person was insured, including not covering the replacement of certain prosthetic devices implemented before the covered person was insured
 - Benefits after insurance ends: Payment for charges after termination is often limited in scope and must be completed within 31 days

11. Continued

- Benefit provisions: Deductibles, coinsurance, copayments, and annual maximums limit the amount of services covered
- (b) List common underwriting and rating parameters for group dental coverage, and describe considerations in using each.
- Group Size: Smaller groups are typically rated higher, and more credibility is given to experience with larger groups
 - Eligible individuals: Some plans cover spouses and dependents, while others are employees only
 - Participation: Plans typically include minimum participation requirements, anti-selection increases as participation declines
 - Employer Contributions: Non-voluntary plans require a minimum contribution level of 50%, plans that cover 100% of premiums are typically given a rate discount
 - Demographics: Groups with more females typically receive rate loads. Also important is geographic area and industry. Unions typically have higher utilization.
 - Waiting and Deferral Periods: To limit anti-selection, there is typically a waiting period or limited coverage of certain
- (c) Evaluate both the favorable and unfavorable impacts the proposed changes would have on Mission's costs.
- Unfavorable:
 - Union groups are typically more aware of benefits, so announcement of a new benefit will likely increase utilization, which increases the total costs
 - Ignoring utilization, removing deductible and cost-sharing are benefit increases, which will increase total costs
 - In addition, removing deductible and cost-sharing are likely to increase utilization, which will increase total costs
 - Adding orthodontia will increase total
 - Making the plan contributory will increase anti-selection and would increase costs on a PMPM basis
 - Favorable
 - However, Mission now covers only 70% of associated claims and expenses so Missions costs will reduce
 - Making the plan contributory may reduce total costs because of lower participation percent
- (d) Recommend next steps to enable Mission to make a counterproposal.

11. Continued

Recommend next steps:

- Look at historical experience costs by category
 - Trend
 - Utilization
 - Claims distribution per rating parameter (maximum, deductible)
- Evaluate costs for each of the parameters requested separately costs by category
 - Deductible (the elimination of the ded would increase costs)
 - Coinsurance levels (increasing coins levels,
 - Adding orthodontics
- Make scenarios on the employee contribution level with different levels of participation and show the cost.
- Come up with alternative plan designs parameters that would mitigate the costs (identify which) and answer the needs of the employer and union.

12. Learning Objectives:

3. Evaluate and recommend an employee benefit strategy.

Learning Outcomes:

- (3a) Describe employer's rationale and strategies for offering employee benefit plans.
- (3b) Evaluate the elements of cafeteria plan design, pricing and management.
- (3c) Recommend an employee benefit strategy in light of an employer's objectives

Sources:

The Handbook of Employee Benefits, Chapter 2

The Handbook of Employee Benefits, Chapter 18

Canadian Handbook of Flexible Benefits, Chapter 16

Solution:

- (a) Explain why organizations use an organized system for classifying and analyzing risks to evaluate employee benefits strategies.
 - Employee Benefits are viewed as a significant element in total compensation by employees and thus should be planned and organized to be as effective in meeting employees needs
 - Employee benefits are a large part of labor costs and thus effective planning can avoid waste and help control employer costs
 - Employee Benefits may have been adopted on a piecemeal basis, and thus should be periodically reviewed to identify overlaps and gaps
 - Changes in tax laws, regulations, and economic climate occur and thus it is important to use a systematic approach to plan benefits to keep them current, cost effective, and compliant
- (b) Identify considerations in establishing an Employer's Total Compensation Policy.
 - General compensation policy in line with industry, community, or both.
 - Type of industry and type of organization (mature industrial, nonprofit, sales, etc)
 - Balance between cash and non-cash compensation and short-term versus long-term compensation
 - Balance between compensation/service-oriented and benefit/need-oriented

12. Continued

- (c) List considerations used in analyzing the benefits presently available at Company ABC and explain the rationale for reviewing these considerations.
- Outline the different types of benefits
 - i. To ensure the coverage is for services needed by the employees
 - Determine levels of benefits
 - i. If the benefits are too rich, then could be too costly for value
 - ii. If not rich, then of little value to the employee
 - Consider probationary periods
 - i. The longer the probationary period, the greater the exposure of employees and others to a loss not covered by the plan
 - ii. Helps manage the loss exposures of the plan
 - Determine eligibility requirements
 - i. Cover appropriate population (ex: retirees, actives, etc)
 - ii. The greater covered, the greater the cost
 - Determine contribution requirements
 - i. Contributions can impact participation and how well the plan meets the needs of the employee group as a whole
 - ii. Trade-off on cost of employer and participation of employees
 - Determine flexibility available
 - i. The more flexibility employees have the more likely the benefit will meet their needs
 - ii. Too much flexibility and employees may misperceive or not understand their needs
 - Consider bundling products
 - i. Lowers costs by combining predictable benefits with less predictable benefits
- (d) Describe the advantages of voluntary benefits.
- Employer Perspective
 - i. Can offer more benefits without significant added cost to employer
 - ii. Can supplement or replace employer sponsored benefits that have been reduced or eliminated
 - iii. Can act as a recruitment or retention tool
 - iv. Employer could only pay for administrative costs
 - v. Can use as incentive by providing benefits to employees that meet performance targets
 - vi. Can offer some benefits to a specific subset of employees (e.g. vision)

12. Continued

- Employee Perspective
 - i. Benefits are generally portable
 - ii. Benefits are generally cheaper under group plans vs individual plans
 - iii. Benefits may have tax advantages

- (e) Explain how Company ABC can control adverse selection in choosing its voluntary benefits.
 - Limit the frequency of choice
 - The longer the period of coverage the more difficult it is for the employee to predict expenses or influence the timing of incurring expenses
 - Limit the degree of change
 - Makes it difficult for an employee to make major changes based on knowledge of upcoming expenses
 - Level the spread between options
 - Promotes a larger covered employee group, thereby spreading the financial risk over a wider population
 - Group certain coverages together
 - Reduced employee's ability to predict specific benefit plan utilization
 - Delay full payment
 - Prevent a "windfall" accruing to employees included to move in and out of coverage
 - Offer a health spending account
 - Reduces insurance element from these types of elections (thereby fixing the benefit cost)
 - Maintain parallel plan design
 - Consistency in plan option design helps to avoid differences in coverage that employees can manipulate
 - Test the program with employees
 - Testing may bring to light potential weaknesses in the design that later could produce adverse selection
 - Add/increase participation requirements
 - Provides a better mix of healthy vs unhealthy insured's

13. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
 - a. Group and individual medical, dental and pharmacy plans
 - b. Group and individual long-term disability plans
 - c. Group short-term disability plans
 - d. Supplementary plans, like Medicare Supplement
 - e. Group and Individual Long Term Care Insurance

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Learning Outcomes:

- (2d) Recommend a manual rate.

Sources:

Group Insurance, Bloom, Chapter 5 and Chapter 34

Commentary on Question:

This question was testing candidates' understanding of some basic disability provisions typically found in policies, and to apply some of those concepts while calculating disability claims.

Solution:

- (a)
- (i) Define the any occupation definition of disability.
 - (ii) Define the own occupation definition of disability.
 - (iii) Explain how and why insurers use these definitions in combination in a policy.

Commentary on Question:

In general, candidates performed very well on section (a).

- (i) Disability defined as the inability to perform the duties of any job
- (ii) An insurance policy that covers individuals who become disabled and are unable to perform the duties that they have been trained to perform.
- (iii) Typically, an insurer will use "own occupation" for a set time period, and then enforce the "any occupation" provision, which is more restrictive. This accomplishes the following:

13. Continued

- Keeps claim costs down because fewer qualify
 - Prevents malingering with less severe disabilities
 - During the “own occupation” elimination period, provides a time period for training for another job
- (b) Define each of the following LTD benefit provisions and assess how each incents a change in claimants’ behavior:
- (i) Elimination period
 - (ii) Benefit period
 - (iii) Benefit amounts
 - (iv) Offsets for other sources of income
 - (v) Pre-existing condition exclusion

Commentary on Question:

In general, candidates also performed well for section (b).

- (i) Elimination Period: A period of time that covered employees must be disabled before they are eligible to collect disability income benefits...often 3-6 months. This reduces the costs of the program by eliminating less severe claims
- (ii) Benefit Period: An insurer will establish a fixed time period over which benefits are paid. Typically 12 or 24 months, or to age 65. A shorter benefit period just eliminates claims cost, but doesn’t actually alter behavior.
- (iii) Benefit Amounts: Monthly benefits are typically equal to a defined percentage of pre-disability earnings. A lower percentage of income replacement will incent more people to return to work faster.
- (iv) Offsets for other sources of income: The LTD benefit is usually offset by income from other sources. This ensures that the sum of disability income does not exceed pre-disability earnings. Examples of offsets include Social Security, worker’s compensation, or part-time work. Depending on the offset method, insureds may be dis-incentivized to seek part time work.
- (v) Pre-existing condition exclusion: The plan would not pay benefits for conditions that already exist. For instance, a plan may not pay for disabilities during the first 12 months of the policy for conditions which manifested themselves within 3 to 12 months prior to the issuance of the policy. This reduces anti-selection in the plan.

13. Continued

- (c) Calculate the expected claim payments for each of the first three years since disability. Show your work.

Commentary on Question:

Candidates were more challenged in this section. It was common for candidates to not apply the elimination period in Year 1 claims. It was even more common for candidates to not correctly apply the implication of "own occupation" in Year 3 claims.

Number disabled in year 1 = $10,000 \times .005 = 50$

Benefit payments = $\$200,000 \times 60\% = \$120,000$

Determine 3 years of claims for the cohort of 50 disableds:

Year 1 claims: *due to elimination period, claims occur for only half the year...*

$50 \text{ disableds} \times \$120,000 \times .5 \text{ (half a year)} = \$3,000,000$

Year 2 claims: *no more elimination period; 84% remain disable for more than 12 months*

$50 \text{ disableds} \times 84\% \times 120,000 = \$5,040,000$

Year 3 claims: *70% remain disabled for more than 24 months; also, any occupation definition starts half way through year since that point is 24 months from beginning of disability payments, so need to apply 38% halfway through year. Therefore there are two components to year 3 claims...*

Payments for months 24-30 = $50 \times 70\% \times \$120,000 \times .5 = \$2,100,000$

Payments for months 30-36 = $50 \times 70\% \times 38\% \times \$120,000 \times .5 = \$798,000$

Total Year 3 claims = $\$2,100,000 + \$798,000 = \$2,898,000$

14. Learning Objectives:

1. The candidate will understand how to describe plan provisions typically offered under:
 - a. Group and individual medical, dental and pharmacy plans
 - b. Group and individual long-term disability plans
 - c. Group short-term disability plans
 - d. Supplementary plans, like Medicare Supplement
 - e. Group and Individual Long Term Care Insurance

2. The candidate will understand and recommend a manual rate for each of the coverages described in Learning Objective 1.

Sources:

Group Ins 6th Ch 9 - Prescription Drug Benefits in the US

ASOP No. 23

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) List and describe different prescription drug coverage types that are typically available.

Commentary on Question:

Most candidates were successful in listing and describing both types of coverage. Those that were unsuccessful described specific benefit designs instead of the coverage types.

1. Drug Card Program
 - Not integrated with medical benefits
 - Self-contained, often administered by a PBM
 - Benefits obtained through the use of a card
 - Can have broad or narrow networks
2. Major Medical Integrated
 - Integrated with medical benefits – under same deductible and MOOP
 - Common with HDHPs

14. Continued

- (b) List and describe different formulary options that are available for prescription drug plans.

Commentary on Question:

Most candidates were successful in listing and describing the three formulary options. Those that were unsuccessful focused solely on the benefit designs of a tiered formulary.

1. Closed formulary
 - only covers drugs on the formulary
 - must have process to allow for coverage of non-formulary drugs based on medical necessity
2. Open formulary
 - Typically covers all drugs
 - Usually affects the cost of the drug only based on copays or coinsurance
3. Tiered Formulary
 - More than one cost sharing tier
 - Most are open, but can be closed

- (c) Explain how ASOP 23 applies to this situation.

Commentary on Question:

Candidates that were most successful covered each of the main points covered in ASOP 23 with explanations. Most candidates focused solely on the details of a single part of ASOP 23 and did not discuss it in its entirety.

1. Selection of data
 - consider the scope of the assignment and the intended use of the analysis being performed in order to determine the nature of the data needed and the number of alternative data sets or data sources
2. Reliance on Data Supplied by Others:
 - accuracy and comprehensiveness of data supplied by others are the other's responsibility
 - subject to the guidance in section 3.5
 - reliance on data from others should be disclosed
3. Reliance on Other Information Relevant to the Use of Data
 - may rely on such information supplied by another, unless apparent to the actuary during the time of the assignment that the information contains material errors or is otherwise unreliable

14. Continued

4. Review of Data
 - a. Data Definitions
 - Make reasonable effort to define of each element in the studies
 - b. Identify Questionable Data Values
 - data values that are materially questionable or relationships materially inconsistent
 - questionable or inconsistent data values: if possible material effect on the analysis, the actuary should consider further steps, when practical, to improve the quality of the data.
 - c. Review of Prior Data
 - If similar work has been previously recently, review the current data for consistency with the data used in the prior analysis.
 - If no prior data, should consider requesting the prior data.
 - If no review, it should be disclosed.
5. Limitation of the Actuary's Responsibility: actuary does not have to :
 - Determine if the data from others is falsified or intentionally misleading
 - Develop add'l data solely for the purpose of searching for questionable or inconsistent data.
 - Audit the data
6. Use of Data: professional judgment as to if the data is :
 - sufficient quality to perform the analysis;
 - require enhancement before the analysis or needs to be adjusted for judgmental or assumptions to perform the analysis. If data with adjustments may cause material may cause material bias or uncertainty, it may be disclosed
 - contains material defects, the actuary should determine nature of extent and checking before doing the analysis.
 - Is so inadequate, actuary should obtain other data or decline to complete the analysis.
7. Documentation: comply with the requirements of ASOP No. 41, *Actuarial Communications*,
 - process to evaluate the data, including the review or consideration of prior data
 - description of any material defects
 - description of any adjustments or modifications made to the data, including their rationale
 - other documentation necessary to comply

14. Continued

- (d) Calculate the expected utilization and plan cost, both by tier and in total, for 2015 for the proposed benefits. Show your work.

Commentary on Question:

Most candidates were successful in understanding and applying the concepts of the question. However, the most common error was applying the trend incorrectly.

Tier	(Step 1) Trend & Distribute Utilization	(Step 2) Trend & Distribute Cost
1	$900,000 * (1.02)^2 * 0.70 = 655,452$	$\$45,000,000 * (1.02)^2 * (1.1)^2 * 0.45 = \$25,492,401$
2	$900,000 * (1.02)^2 * 0.15 = 140,454$	$\$45,000,000 * (1.02)^2 * (1.1)^2 * 0.20 = \$11,329,956$
3	$900,000 * (1.02)^2 * 0.10 = 93,636$	$\$45,000,000 * (1.02)^2 * (1.1)^2 * 0.20 = \$11,329,956$
4	$900,000 * (1.02)^2 * 0.05 + 100,000 * (1.04)^2 * 1.00 = 154,978$	$\$45,000,000 * (1.02)^2 * (1.1)^2 * 0.15 + \$15,000,000 * (1.04)^2 * (1.25)^2 * 1.00 = \$33,847,467$
Total	$SUM (Tiers 1-4) = 1,044,520$	$SUM (Tiers 1-4) = \$81,999,780$
Tier	(Step 3) Calculate Member Cost	(Step 4) Calculate Plan Cost
1	$655,452 * \$10 = \$6,554,520$	$\$25,492,401 - \$6,554,520 = \$18,937,881$
2	$140,454 * \$25 = \$3,511,350$	$\$11,329,956 - \$3,511,350 = \$7,818,606$
3	$93,636 * \$40 = \$3,745,440$	$\$11,329,956 - \$3,745,440 = \$7,584,516$
4	$\$33,847,467 * 0.25 = \$8,461,866.75$	$\$33,847,467 - \$8,461,866.75 = \$25,385,600.25$
Total	$SUM (Tiers 1-4) = \$22,273,176.75$	$SUM (Tiers 1-4) = \$59,726,603.25$

15. Learning Objectives:

2. The candidate will understand the concepts of prospective and retrospective experience rating concepts.

Sources:

Bluhm Ch. 37

Commentary on Question:

Commentary listed underneath question component.

Solution:

- (a) Define prospective experience rating and retrospective experience rating.

Commentary on Question:

Candidates receive 2 grading points for each definition, one grading point per item

Prospective rate calculations are

- the evaluation of past experience to predict the probable experience for a future rating period,
- leading to gross premium rates to be charged. The coverage period is most often (but by no means always) an upcoming policy year.

Retrospective rate calculations are

- the evaluation and measurement of financial experience for a past period of time, usually a contract year,
- determined in great part by the cost of providing insurance for that period to the policyholder.

- (b) Define each component listed above with respect to retrospective experience rating.

Commentary on Question:

Candidates receive 1 grading points for each definition. No credit should be given for naming only as the items are named in the question. If more than one item is in the definition then one grading point can be given for each item, with a maximum of 1 grading point per item

Prior Formula Balance carried forward - If the prior year's formula balance has not been eliminated, the remaining balance is usually carried forward into the next year's formula.

15. Continued

Premiums –

- the premium paid by the policyholder for the contract year,
- possibly adjusted with interest charges or credits for the timing of premium payments

Investment earnings on money held - the crediting of investment income earned on large balances held by the insurer on behalf of the policyholder needs to be considered

Claims charged –

- Determine the historical claims experience and
- any modifications needed for the claims experience

Expenses charged - Expenses for an insurance company are generally allocated to lines of business based upon corporate-wide expense studies.

Risk charge –

- This is a generic term that may be used to cover charges for a multitude of risks.
- Usually, however, it refers to the charge made by the insurer to cover the risk that the policyholder will leave the insurer in a loss position.

Rate stabilization reserve addition - Some carriers will try to reduce their risk of being in a deficit position by accumulating a portion of policyholder surplus in a reserve that can be used to offset experience fluctuations.

Profit - Most carriers are reluctant to show an explicit profit charge on experience exhibits which are shown to policyholders. Rather, profit margins are often built into other assumptions, such as expenses, risk charges, or even claims charged.

- (c) Calculate the retrospective refund. Show your work.

Commentary on Question:

Candidates receive 2 grading points for the formula, 1 grading point for the appropriate values for revenues, and 1 grading point for the appropriate values for expenses

(Prior Formula Balance carried forward)
+ (Premiums)
+ (Investment earnings on money held)
– (Claims charged)
– (Expenses charged)
– (Risk charge)
– (Rate stabilization reserve addition)
– (Profit)

15. Continued

Add: Premiums: \$500,000, Investment earnings on money held: \$15,000, Prior Formula Balance carried forward: \$75,000

Subtract: Claims charged: \$475,000, Expenses charged: \$50,000, Risk charge: \$20,000, Rate stabilization reserve addition: \$10,000, Profit: \$30,000

Answer: \$5,000