GH CORU Model Solutions
Fall 2016

1. **Learning Objectives:**

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

Learning Outcomes:

(6b) Describe the major applicable laws and regulations and evaluate their impact.

Sources:

Implications of Individual Subsidies in the Affordable Care Act

Commentary on Question:

The question was trying to address the candidate's understanding of how the ACA has had an impact on individual premiums in the real world. In addition to knowing provisions of the regulation that impacted an individual's premium, the candidate was required to calculate a series of sample premiums given a hypothetical consumer. In addition to knowing how to calculate premiums, the candidate needed to know the applicable penalties for not purchasing the required minimum coverage.

Solution:

(a) List the ACA provisions that exert upward pressure on individual premiums.

Commentary on Question:

Candidates generally performed well on this question. A typical mistake candidates made was confusing the provisions that put upward pressure on individual premiums with the provisions that exerted downward pressure. Another common error was not listing enough items to receive full credit.

- Access to insurance is guaranteed and health status can no longer be used as a rating variable
- Issuers can no longer exclude coverage for pre-existing conditions
- Comprehensive coverage
- Guaranteed Issue
- Industry taxes
- Age rating compression (upwards pressure for younger individuals)

1. Continued

(b) List and describe ACA provisions intended to lower individual premiums.

Commentary on Question:
Similar to part a, some candidates confused the provisions putting upward versus downward pressure on premiums. Additionally, candidates were required to describe the provision. Full credit was not awarded for providing only a list of provisions.

- Rate review: Exchange qualified plans must be reviewed at the federal level (as well as typical state review).
  - Some states have increased scrutiny on review due to receiving federal grants

- Minimum Loss Ratio: allows for 80% of premium to be reserved for medical expenses
  - Adjusted for quality improvement costs (QIA), taxes and assessments
  - If ratio of adjusted claims : premium below 80% threshold, must refund different to the policy holder
  - Calculation includes adjustments for risk adjustment, reinsurance and risk corridor

- Individual Mandate Requiring most individuals to purchase insurance. Some exemptions do exist for tax penalty.
  - Intended to entice healthier individuals to enroll and subsidize older/sicker insured population
  - Penalty increase in 2015 and 2016:
    - 2014: Max($95, 1% Income)
    - 2015: Max($325, 2% income)
    - 2016: Max($695, 2.5% Income)

- Metal Tiers: Health plans required to standardize coverage by requiring plans to meet actuarial value criteria
  - Allows for greater transparency on the marketplace
  - Some flexibility of plan design required

- Risk Adjustment: zero-sum game across each market intended to compensate insurers who attract more than their fair share of high risk members.
  - Ensures issuers compete on ability to provide quality affordable care with an efficient administrative system
  - Foster stability and competition

- Premium subsidies: large financial commitment from federal government to subsidize low income premium and cost sharing

1. Continued

(c) Explain how the structure of the ACA might discourage younger individuals from buying ACA applicable plans.

Commentary on Question:
Candidates generally received half credit or more on this question. Many candidates were able to make note of the age curve but provided little to no explanation with regard to what it entails. Providing more commentary than a list was required to receive full credit.

- Upward pressure on premium rates for younger population due to limited age curve.
  - Generally accepted age curve thought to be around 5:1 – 7:1
  - ACA limits age curve to 3:1
  - Intended to lower premium costs to older people however also creates less attractive market for younger people
- Cost sharing subsidies decided based on income only, not age. This causes a bias for subsidies for older population.
- Children are allowed to stay on parent's insurance plan until age 26.
- Above along with extension of pre-ACA benefits further give younger individuals higher likelihood of opting out of ACA based plans.

(d) Determine the optimal coverage decision for this individual based solely on cost. Show your work.

Commentary on Question:
Overall, candidates did not perform well on this question. Candidates were able to identify the member's income relative to FPL and identify the maximum premium contribution for the given income level. Some candidates failed to identify the proper benchmark premium for calculating the subsidy. Since the individual's income was on the threshold for the cost sharing reduction subsidy, credit was award for individuals who noted either scenario and properly calculated the subsidy.
Many candidates failed to correctly identify the accurate cost of foregoing coverage.
When calculating the premiums for coverage, some candidates assumed the member liability was a monthly cost similar to the plan premium, which grossly overstated the member's total payment.
Many candidates noted that the lowest cost option for the member was to select the Bronze plan. However, in order to properly arrive at the lowest cost, the candidate was required to also calculate the penalty for foregoing coverage (which was the lowest cost option in this scenario).

1. Continued

- Individual at 250% FPL ($28,725 / $11,490)
- Maximum premium contribution 250% FPL - 8.05% -> 28,725 * 0.0805 / 12 = $192.70
- Benchmark plan is second lowest silver = $224
- Individual qualifies for premium subsidy of $31.30 ($224 - $192.70)
- No cost sharing reduction since individual's income is at 250% FPL
- 2014 penalty for opting out of coverage = MAX($95, 1% of 28,725) = $287.25
- **Cost without insurance = Claims + Penalty = $800 (billed, not allowed if no insurance) + 287.25 = $1,087.25**

Metal	*Lowest Premium*	*Maximum Contribution*	*Net Yearly Premium Cost*	*AV*	*Allowed Costs*	*Insurance Liability*	*Member Liability*	*Total Member Payment*
B	*$173.00*	*$141.70*	*$1,700.40*	*60%*	*$500.00*	*$300.00*	*$200.00*	*$1,900.40*
S	*$202.00*	*$170.70*	*$2,048.40*	*70%*	*$500.00*	*$350.00*	*$150.00*	*$2,198.40*
G	*$230.00*	*$198.70*	*$2,384.40*	*80%*	*$500.00*	*$400.00*	*$100.00*	*$2,484.40*
P	*$258.00*	*$226.70*	*$2,720.40*	*90%*	*$500.00*	*$450.00*	*$50.00*	*$2,770.40*

2. 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:

Sources:
SFAS 60

Commentary on Question:
Commentary listed underneath question component.

Solution:

(a) Describe the differences between a "short duration" contract and a "long duration" contract.

Commentary on Question:
Candidates generally did well on this portion of the question. One note is that the time period that the benefit is in force is not the sole determining factor of whether it is a short duration product or a long duration product.

- A short duration contract provides insurance protection for a fixed short duration.
- A long duration contract requires the performance of various functions & services over an extended period of time.
- A short duration contract enables the insurer to cancel the contract or adjust its provisions at the end of each contract period.
- A long duration contract is not subject to unilateral changes in its provisions.

(b) Explain why this sales plan will not produce $1,000,000 in revenue.

Commentary on Question:
Candidates typically did well on this portion of the question. Some candidates confused the longer time period that the Credit Life is in force for a long duration product.

2. Continued

- Credit Life insurance contracts are typically considered "Short Duration" contracts because they are a special type of Term Life insurance with non-guaranteed renewable features.
- As such, according to FAS60, the premium for a Credit One policy should be recognized over the period of the contract in proportion to the amount of insurance protection provided.
- Since the $100 premium for each policy covers 1 year, a policy sold at the halfway point during the year will only recognize half of the $100 premium in the financial statements for 2017. Hence, the total revenue recognized in the financial statements for 2017 will be a fraction of $1M.

(c) Calculate how much revenue the Sales Plan will generate for the firm for the full financial year. Show your work.

Commentary on Question:
Candidates generally did well on this part of the question. Note that credit was given if no rounding was used on the monthly revenue of $8.333 and if the total year's revenue was $633,333.

- Assume that risk is uniform across the 12 months of the product in the first year.
- Revenue recognized for 1 month = $100 / 12 = $8.333
- Revenue recognized for Jan Sales = 12 * 8.333 * 2,000 = $199,920
- Revenue recognized for Apr Sales = 9 * 8.333 * 3,000 = $224,910
- Revenue recognized for July Sales = 6 * 8.333 * 4,000 = $199,920
- Revenue recognized for Dec Sales = 1 * 8.333 * 1,000 = $8,333
  Total Revenue for Full Year = $625,583

(d) Recommend four different options to modify the sales strategy to achieve the revenue target.

Commentary on Question:
Candidates typically received some credit on this portion of the question, with few candidates receiving full credit.

- Try to sell as many Short Duration Credit Life policies in January 2017 as possible. A policy sold in January would have $100 of revenue recognized within the calendar year, thus allowing the company to hit its revenue targets.
- Focus on selling 10,000 Long Duration Single-Premium contracts at $100 each. Long Duration contracts recognize revenue when due from policyholders. Hence, if $100 is collected up-front, it is immediately recognized as revenue.

2. Continued

- Sell higher premium policies (e.g. if Annual Premium per policy is $120 instead of $100, you would achieve $1M in revenue at 10,000 contracts sold as per current plan).
  Sell more policies at $100 per policy (e.g. if Sales Target is 12,000 Short Duration Credit One policies, you would achieve $1M in revenue).

(e) Explain why the gross margin estimate is incorrect.

Commentary on Question:
Candidates generally received partial credit on this question. While most candidates probably realized these policies fell under the category of "long duration" contract not all of candidates stated this fact.

- Although it is unlikely that there will be many claims on a Whole Life policy in the first year, it is possible that some policyholders do claim. Hence, the $120,000 earnings estimate is already quite aggressive and not conservative.
- Whole Life policies are considered "Long Duration" contracts.
- A claims liability for future policy benefits has to be accrued when premium revenue is recognized.
- This liability represents the present value of future net benefits & expenses less present value of future net premiums.

(f) Calculate the total expenses in 2017 for the original sales plan for each product. Show your work.

Commentary on Question:
Candidates did not do well on this portion of the question. In the model solution below Fixed Overhead is split evenly for simplicity, but a split by premium or by number of policies was also accepted. Credit One is a short duration product while Life One is a long duration product and their acquisition costs should be treated accordingly.

- Fixed Overhead for Credit One = $7,500
- Maintenance Costs for Credit One = 0.6% * 625,583 (*answer from part (c)*) = $3,753
- UW Cost for Credit One = 10,000 * (625,583 / 1,000,000) = $6,256
- Sales Bonus for Credit One = 5% * $100 * 10,000 * (625,583 / 1,000,000) = $31,279
- Policy Issue Cost for Credit One = $7 * (625,583 / 1,000,000) * 10,000 = $43,791
- Total Expenses for Credit One = $92,579
- Fixed Overhead for Life One = $7,500
- Maintenance Costs for Life One = $2 * 12 * 1,000 = $24,000

2. Continued

- UW Cost for Life One = 6,000 * (1 / 50) = $120
- Sales Bonus for Life One = 75% * $10 * 12 * 1000 * (1 / 50) = $1,800
- Policy Issue Cost for Life One = $120 * 1,000 * (1 / 50) = $2,400
- Total Expenses for Credit One = $35,820

Total Expenses incurred in 2017 = Sum of all bullet points = **$128,399**

(g) Describe briefly what items a life insurance company should disclose in its financial statements according to SFAS 60.

Commentary on Question:
Candidates did not do well on this portion of the question. Most candidates listed out items that would be on a financial statement without any description of what should be said about the item.

- Basis for estimating liabilities for unpaid claims & claims expenses
- Methods and assumptions used in estimating FPB liability
- Disclosure of average rate of assumed investment yields for current year
- Nature of acquisition costs capitalized, amortization method, and amount
- Undiscounted amount of liabilities for unpaid claims & expenses for short duration contracts and the range of discount rates used for PV calculations
- Whether or not investment income is used in premium deficiency testing
- Nature and significance of reinsurance transactions

3. Learning Objectives:

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

Learning Outcomes:

(4c) Describe benefits and eligibility requirements for Medicaid and Children's Health Insurance Program (CHIP).

Sources:

GHC-811-16 Medicaid 101 MACPAC

GHC-812-16 Medicaid A Primer (pp 1-33)

GHC-813-16 Medicaid and Long Term Services and Supports. (pp 1-10)

GHC-814-16 Medicaid Expanding Medicaid to the New Adult Group Through Section 1115 Waivers

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List the major eligibility groups under Medicaid.

Commentary on Question:

Candidates generally did well on this part of the question since it required a straightforward list of eligible groups.

Category 1. Children and pregnant Women
Category 2. Non-aged, non-disabled and non-pregnant adults who have incomes less than the Federal Poverty Level
Category 3. Those aged 65 and over and people with disabilities.

(b) Describe the characteristics of the ACA Medicaid expansion population.

Commentary on Question:

Most candidates mentioned the expansion of Medicaid to those with incomes less than 138% (133%) of the FPL. However, to receive maximum credit for this answer, candidates were expected to mention additional demographics of the population.

Adults under age 65, and
Income < 138% of FPL, and
Not Pregnant, and
Not covered by Medicare

3. Continued

(c) Critique the proposed changes. Show your work.

Commentary on Question:
Candidates took a variety of approaches to "critique" the proposed changes. Most candidates gave an opinion as to whether each proposed change was a good idea or whether it would lead to higher costs down the road. The candidates who scored the highest recognized that some of the proposed changes violated Medicaid regulations for federal funding. Many candidates stated that Dental was a required benefit for children covered under Medicaid. That is true under the "Expanded" Medicaid but the question clearly mentioned the state had not yet adopted the expansion of Medicaid. Some candidates noticed the "Total" row did not equal the sum of the costs above.

Lab Testing is a required preventive benefit under Medicaid so the state is not allowed to drop this benefit. Besides, if the state were to drop this benefit costs may end up increasing over time due to lack of early treatment.
Dental can be dropped since it is not a required benefit under Medicaid. Children's dental is required under the expanded Medicaid program but the question says this state has not yet adopted the Expansion.
Emergency Room copay is allowed under Medicaid and should be implemented. This will deter people from using the ER for minor medical issues.
Adding a copay for Outpatient Surgery is allowed under Medicaid. Similar to Emergency Room, a copay will require the individual to have some skin in the game which will hopefully limit unnecessary surgeries.
Adding a copay for Office Visits only for adults with no dependents would be considered discriminatory and is not allowed under Medicaid.
Adding coinsurance to pharmaceuticals in a particular geographic region of the state is considered discriminatory and is not allowed under Medicaid. This would most like negatively impact those in rural regions of the state more than those in urban areas.

3. Continued

(d) Calculate the achievable impact to the state budget. Show your work

Commentary on Question:
This question required the candidate to trend the 2015 data to 2017 and most candidates did that well. This question also tested the candidates' knowledge about cost-sharing under Medicaid with respect to what a state is allowed to do and still receive federal funding. Most candidates applied all of the cost sharing measures as provided in the question. Some recognized Lab Testing was mandatory and others rejected cost sharing for Child Dental which is required under Expanded Medicaid. Very few candidates (if any) recognized that children do not have copays. The provided totals in the exam question for the 2015 PMPM Experience did not equal the sum of the services. In determining the cost savings, candidates were given credit for comparing the 2017 trended costs to either the totals provided or their own corrected totals. The corrected totals are used in the model solution.

Trend 2015 to 2017:
2017 PMPM = (2015 PMPM) x $(1+\text{Annual Pricing Trend})^2$

Note: The given 2015 PMPM Totals were incorrect.

	2015 Member months			2017 Member months	
	Adults	Children		Adults	Children
	680,000	900,000	Trend	643,000	972,000
IP Care	22	14	1.03	22.66	14.42
Emergency Room	8	4	0.97	7.76	3.88
OP Surgery	7.75	4	1.08	8.38	4.33
Lab/Path	4	3	1.08	4.33	3.24
OP other	11	8	1.04	11.44	8.32
Phys Maternity	4	1	0.97	3.88	0.97
Phys Other	12	9	1.03	12.36	9.27
Dental	4	2.5	1.01	4.04	2.53
Pharmacy	12	6	1.06	12.73	6.37
Total	84.75	51.5		87.59	53.33

Apply the cost saving measures which are allowed.
Lab / Pathology Testing is mandatory so no cost savings.
Dental savings is allowed
ER Copay for adults is allowed
OP Surgery copay for adults is allowed

3. Continued

Office Visit copays for adults without dependents is discriminatory and not allowed
The proposed change to the Pharmacy benefit is discriminatory and not allowed
NOTE: Copays for Children are not allowed

	Member months		Savings		Savings	
	Adults	Children	Adults	Children	Adults	Children
	643,000	972,000			643,000	972,000
IP Care	22.66	14.42	0%	0%	0.00	0.00
ER	7.76	3.88	20%	0%	1.55	0.00
OP Surg	8.38	4.33	20%	0%	1.68	0.00
Lab/Path	4.33	3.24	0%	0%	0.00	0.00
OP other	11.44	8.32	0%	0%	0.00	0.00
Phys Mat.	3.88	0.97	0%	0%	0.00	0.00
Phys Other	12.36	9.27	0%	0%	0.00	0.00
Dental	4.04	2.53	100%	100%	4.04	2.53
Pharmacy	12.73	6.37	0%	0%	0.00	0.00
Total	87.59	53.33			7.27	2.53

Adult Savings = 7.27 x 643,000 = 4,674,610
Child Savings = 2.53 x 972,000 = 2,459,160
Total Savings = 7,133,770

This Savings falls short of the $11,000,000 targeted savings

However, even if the State had achieved its $11 million goal, the State shares the costs / savings with the Federal government. The State's share of the savings would be between 25% and 50% of the total savings depending on the state. In $ terms that would be between about $1.8 million and $3.6 million. Even in the best case, the State falls well short of the $11 million target.

4. **Learning Objectives:**

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

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

Learning Outcomes:

(6b) Describe the major applicable laws and regulations and evaluate their impact.

(7a) Describe why employers offer retiree group and life benefits.

(7d) Describe funding alternatives for retiree benefits.

Sources:

Group Insurance – chapter 8

Commentary on Question:

Candidates were most successful on parts A and C, and struggled to get full credit on parts B and D. Candidates should be careful to follow the SOA Guide to Written Answer Exams and when a question is worded as "Describe," not simply create a list.

Solution:

(a) Describe the reasons why JB would want to offer a retiree benefits package.

Commentary on Question:

Most candidates received full mark for this part of the question. Those that did not receive full mark needed to be careful to describe their answer, and not simply give a short list. Candidates were awarded partial credit for lists, and not ALL of the points in the model solution were needed to earn full credit.

- Retiree group benefits are a tax-effective means of providing retirement financial security;
- It is a valuable benefit for those currently receiving the coverage or who are soon to retire;
- The benefits can support workforce planning and growth opportunities for employees;
- Providing ongoing health care coverage is a social responsibility of the employer;
- Providing retiree health care benefits helps provide a competitive package of total compensation;
- The current cash costs are nominal relative to the total spending on benefits; and
- Retiree benefits are often at the top of the list of union demands.

4. Continued

(b) Discuss trends in the prevalence of retiree health benefits in the public sector versus the private sector.

Commentary on Question:
Most candidates struggled with question, and some even made mention of benefits other than the health (e.g., pensions). Furthermore, some candidates confused the "public sector" with public programs such as Medicare and Medicaid, when the question was actually referencing government employees and the like. Finally, very few candidates recognized the accounting implications (e.g., FAS 106, GASB45, etc.) as reasons for the current trends in both sectors.

Private Sector

Trends
- Fewer private employers are offering retiree health benefits
- Employers have been making plan changes to reduce future obligations

Reasons
- FAS 106 because it forced employers to recognize cost while employees work, rather than when they receive benefits
- This also brought attention to the cost of these benefits
- ACA due to the exchanges and guaranteed issue

Public Sector

Trends
- Not currently experiencing the same decline in retiree benefit offerings
- However they may begin to see the trend

Reasons for no decline
- Union involvement / collective bargaining
- Constitutional requirements

Reasons for potential future decline
- Changes in accounting standards that require employers to report benefits on an accrual basis (GASB 45)

4. Continued

(c) Determine which of the following COB methods results in the lower plan cost for this member:

(i) Standard COB

(ii) Exclusion

Show your work.

Commentary on Question:
Generally speaking, most candidates were able to recall the formulas that should be used for the different methods of COB; although, a fair number of candidates struggled in identifying the appropriate allowed costs to use when evaluating the formulas. Very few candidates verified that the member's cost sharing did not exceed the OOP maximum, and points were deducted accordingly. Candidates also struggled with the wording of the question, and whether or not they should solve for the lowest cost to the member, or lowest cost to the plan. If candidates made the correct assertion, whether answering that Standard COB was lowest for the member, or Exclusion was lowest for the plan, they were given credit. Calculations leading up to this conclusion should have been the same either way.

First, need to calculate
M = net costs under Medicare

Medicare Allowed Cost = $545
Part B Deductible = $147
Part B Coinsurance = 20%
Dollars subject to Coinsurance = $545 - $147 = $398
M = $398 x 80% = $318.40

Next, need to calculate
C= negotiated cost under Plan; and
C% = net costs as if Medicare didn't exist

Medicare Billed Cost = $1,400
CTU provides a 40% discount on Billed Amount
C = $1,400 x 60% = $840
Medigap Deductible = $250
Medigap Coinsurance = 20%
C% = ($840 - $250) x 80% = $472

4. Continued

Check to see if OOP applies:
C – C% = $840 - $472 = $368 < $750
Hence, OOP does not apply.
Thus, C% = $472.00

(i) Calculate the costs under standard COB
Min [C-M, C%] = Min [$840 - $318.40 , $472] = Min [$521.60 , $472] = $472

(ii) Next, calculate costs under exclusion = (C-M)%
Coinsurance = 20%
(C-M)% = ($521.60 - $250) x 80% = $217.28

Exclusion has the lowest plan liability since costs under it are lower than under Standard COB

(d) Describe plan design changes JB should consider in order to reduce their expected future cost.

Commentary on Question:
Even though this was a very straight forward question, most candidates only mentioned changing COB methods and changing the plan cost sharing provisions. Very few candidates included any of the various other ways to reduce future plan liability listed in the model answer. Not all of the points in the model solution were needed in order to earn full credit.

- Introducing or slightly increasing the level of retiree contributions;
- Adopting policies of setting retiree contributions as a fixed percentage of plan cost; and
- Changing the method of coordinating benefits with Medicare .
- Redefining eligibility requirements to be more stringent (such as requiring a person to be at least age 60 with 15 years of service, rather than age 55 with 5 or 10 years of service);
- Introducing service-related benefits (that is, the employer portion of plan cost varies depending on the employee's service at retirement);
- Adjusting retiree contributions based on the employee's age at retirement (early retirement reductions);
- Stating the employer subsidy to the retiree medical plans as a fixed dollar amount, rather than a percentage of plan; and
- Providing an account-based employer subsidy for retiree group benefit plans (for example, the employee "earns" $1,500 for each year of service, so an employee with 20 years of service at retirement has $30,000 for use either to purchase employer plan options or for any other medical expense).

5. 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:

(5b) 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, 11th Edition. Chapters 1, 3, 4

Commentary on Question:

Candidates generally performed well on parts A, B, and C but struggled on parts D and E. To receive full credit, it was important to take note of the verb in each part of the question that would indicate the level of detail needed. For example, since part B asked candidates to "describe" actions Quantum could take, no credit was given for simply listing possible courses of action.

Solution:

(a) Determine whether Quantum has sustainable growth based on its 2013 and 2014 experience. Show your work.

Commentary on Question:

To receive full credit, candidates had to do three things: calculate the sustainable growth rate, calculate the actual growth rate, and then compare those two values to determine if growth was sustainable or not. Some candidates only did the calculations and missed the final step of stating whether or not growth was sustainable, thereby missing out on full credit. Also since there are several different ways to calculate the sustainable growth rate, credit was given for a variety of different approaches.

Sustainable growth rate = SGR = R * ROE, where R = retention rate and ROE = return on equity (beginning of period)

SGR also equals P * R * A * T, where P = profit margin, A = asset turnover ratio, and T = asset to equity ratio (beginning of period)

SGR also equals change in equity / equity (beginning of period)

SGR also equals R * T * return on assets

Note: Candidates only need to spell out one of the above formulas to get full credit.

R = Retention Rate = (Change in retained earnings from EOY 2013 to 2014) / (After tax earnings CY 2014)

R = (13,597 – 12,951) / 4,986 = 0.1295, from Exhibit 9 in case study

5. Continued

ROE = Net profit/Equity (BOP) = 4,986 / 19,861 = 0.251
SGR = R * ROE = 0.1295 * 0.251 = 0.0325 = 3.25%
Actual Growth Rate = 2014 Revenue / 2013 Revenue – 1 = 88,203 / 55,193 – 1 = 59.8%
The actual growth rate of 59.8% is greater than the sustainable growth rate of 3.25%. Thus, Quantum's growth is not sustainable.

(b) Describe actions Quantum could take to mitigate the risk identified in (a).

Commentary on Question:
Candidates identified several good options for Quantum to take to slow growth. If in Part A, a candidate indicated that growth was sustainable, points could still be earned in this section if their answers made sense relative to their solution to Part A. However, each action had to be supported with a description in order to receive credit since this part asked candidates to "describe." No points were given for simply writing down a list.

To slow growth, Quantum could consider the following actions:

- Sell Equity – This is selling shares (ownership stake in the company) to raise capital for the firm
- Increase Leverage – Involves taking on additional debt by issuing bonds or taking out loans
- Profitable Pruning – This is an operating adjustment to manage rapid growth. It can generate cash from sales of marginal businesses
- Increase Prices – Could raise prices (premium rates in this case) to reduce growth
- Merge with another company – Merge with a partner company that has deeper pockets and can fund the actual growth in a sustainable manner

(c) Explain why Quantum may not choose to take each of the actions identified in (b).

Commentary on Question:
Candidates often did well here, as they were able to expand upon their answers in part B and cite disadvantages of each of the options. There were a variety of possible answers, and not all of these had to be listed to receive full credit.

5. Continued

- Sell Equity – Can be expensive to do, and management may not want to lower EPS. Equity market not existent in all industries.
- Increase Leverage – There is a limit to the amount of debt a company can take, and increasing leverage leads to higher chance of default.
- Profitable Pruning – May not want to give up on areas that are not profitable today but may be growth areas in the future
- Increase Prices – May not work with a price-elastic target market, could lose market share
- Merge with another company – This is a drastic change and a lengthy process. May lose control of how the company is run

(d) Describe the three main items of a cash flow statement.

Commentary on Question:
Very few candidates correctly identified the components of a cash flow statement, and even fewer could define each of the three items. Some candidates erroneously listed items from the income statement instead.

1. Cash Flow from Operating Activities
   This is defined as Net Cash Flow +/- Changes in Current Assets & Current Liabilities. This reflects the change in a company's cash position stemming from activities related to the company's day-to-day primary business, such as production, sales, etc.

2. Cash Flow from Investing Activities
   Investing Activities include purchase and sales of Long Term Assets, such as property, machinery, and payments related to M&A's.

3. Cash Flow from Financing Activities
   Financing Activities include inflows from investments, such as banks and shareholders as well as dividends paid out. These are reflected in the long term liabilities and equity of the company.

(e) Identify how changes in items on the balance sheet would impact Quantum's cash flow statement for 2014.

Commentary on Question:
Candidates did very poorly on this part. Many skipped it entirely. To receive credit, candidates needed to list line items from the balance sheet and state which section of the cash flow statement was impacted and in which direction.

- Real estate – Decrease to investing activities
- Accounts payable – decrease to operating activities
- Current portion of long-term debt – decrease to financing activities

6. 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.

(6c) Apply applicable standards of practice.

Sources:

Group Insurance 7th Chapters 18, 19 and 28

Kaiser Foundation: Examining Health Care Reform: Medical Loss Ratio

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Describe the market reforms under the ACA and how they apply to Quantum products.

Commentary on Question:

Most candidates were successful in describing ACA market reforms and relating the items to Quantum products. Additional answers were acceptable beyond those listed in the model solution.

- Insurers are subject to MLR requirements; Quantum individual and small group products need to meet or exceed 80% to avoid paying rebates
- Exchanges were created; Quantum will need to ensure the same plan offered on and off exchange are offered at the same price
- Plans are subject to Actuarial Value testing; Quantum will need to ensure individual and small group plans fall into metal level ranges
- Qualified health plans are required to offer essential health benefits; Legacy plans are considered grandfathered and not subject to these requirements

(b) Outline consumer protection reporting requirements for ACA experience for small and large groups.

- Submission of financial data (premium, claims, quality improvement, taxes and fees) to support MLR reporting requirement
- If MLR standards are not met (>= 80% for small group, >= 85% for large group), insurer is required to issue rebates to policyholders

6. Continued

(c) Describe the components of the conventional MLR calculation and the ACA MLR calculation.

Commentary on Question:
Most candidates were successful in producing the MLR formulas; however, many did not describe the components as requested.

- Conventional MLR = Incurred Claims / Premium
- ACA MLR: (Incurred Claims + Quality Improvement Expenses) / (Premiums – Taxes/Fees)
- Where:
  - **Incurred claims:** payments made by insurers for medical care and prescription drugs
  - **Premium:** all premiums earned from policyholders
  - **Quality improvement expenses:** programs or initiatives that improves quality, transparency, or outcomes.
  - **Taxes/fees:** Includes federal taxes and assessments, state and local taxes, and regulatory licenses and fees.

(d) Calculate the maximum potential member rebate due for 2014 for each of the Quantum health insurance products and identify any adjustments that might apply. Show your work.

Commentary on Question:
Candidates generally did more work than was required for this part and did not recognize that the 2014 MLRs were already provided in the case study.

- Individual Products
  - Legacy: 84.8% (page 7 of case study)
    - Since >= 80%, no rebate
  - HMO: 86.1% (page 8 of case study)
    - Since >= 80%, no rebate
  - PPO: 85.4% (page 8 of case study)
    - Since >= 80%, no rebate
- Small Group Products
  - Legacy: 91.2% (page 11 of case study)
    - Since >= 80%, no rebate
  - HMO: 76.5% (page 12 of case study)
    - Since < 80%, rebate is required:
      - (80% - MLR) * Premium
      - (80% - 76.5%) * 14,859,541 = $520,084
  - PPO: 80.1% (page 12 of case study)
    - Since >= 80%, no rebate

6. Continued

Other adjustments that might apply include:

- Increasing the numerator by including quality improvement expenses
- Decreasing the denominator by including taxes/fees
- Credibility adjustment for low membership

(e)

(i) (*4 points*) Estimate the 2017 ACA MLR(s) for Quantum products. Show your work.

(ii) (*2 points*) Recommend actions to reduce member rebates and provide an example of a tactic for each recommendation.

Commentary on Question:
Most candidates calculated the 2017 ACA MLR for each product and segment combination instead of calculating a combined MLR for individual and small group in total. Other common mistakes included excluding grandfathered Legacy products, using paid claims instead of incurred claims, and not adjusting for member differences between 2014 experience and 2017 projected membership.

Part (i): The 2017 ACA MLR is calculated for each segment, as follows:

Individual

Metric	Legacy Individual	HMO Individual	PPO Individual	Formula
2014 Member Months	52,998	74,055	21,153	A
2014 Premium	$18,779,996	$22,636,685	$6,406,573	B
2014 Incurred Claims	$15,919,661	$19,482,802	$5,469,488	C
2014 Premium PMPM	$354.35	$305.67	$302.87	D = B/A
Premium Trend	0.08	0.07	0.07	E
2017 Premium PMPM	$446.38	$374.46	$371.03	F = D*(1+E)^3
2014 Claim PMPM	$300.38	$263.09	$258.57	G = C / A
Claims Trend	0.04	0.03	0.03	H
2017 Claim PMPM	$337.89	$287.48	$282.54	I = G*(1+H)^3

J = Total Individual Premium PMPM *(weighting on projected member months provided)*
= ($446.38*20,000 + $374.46*15,000 + $371.03*42,000) / (20,000 + 15,000 + 42,000)
= $391.27

6. Continued

K = Total Individual Claim PMPM *(weighting on projected member months provided)*
= ($337.89*20,000 + $287.48*15,000 + $282.54*42,000) / (20,000 + 15,000 + 42,000)
= $297.88

L = Total Individual Quality Improvement PMPM = J * 0.01 = $3.91

M = Total Individual Taxes/Fees PMPM = J * 0.02 = $7.83

Individual MLR = (K + L) / (J – M)
= ($297.88 + $3.91) / ($391.27 – $7.83) = **78.7%**

Small Group

Metric	Legacy Small Group	HMO Small Group	PPO Small Group	Formula
2014 Member Months	52,280	49,370	24,751	A
2014 Premium	$14,747,110	$14,859,541	$7,698,525	B
2014 Incurred Claims	$13,455,071	$11,363,321	$6,164,164	C
2014 Premium PMPM	$282.08	$300.98	$311.04	D = B/A
Premium Trend	0.06	0.05	0.06	E
2017 Premium PMPM	$335.96	$348.43	$370.45	F = D*(1+E)^3
2014 Claim PMPM	$257.37	$230.17	$249.05	G = C / A
Claims Trend	0.04	0.02	0.04	H
2017 Claim PMPM	$289.50	$244.25	$280.14	I = G*(1+H)^3

J = Total Small Group Premium PMPM *(weighting on projected member months provided)*
= ($335.96*17,000 + $348.43*18,000 + $370.45*41,000) / (17,000 + 18,000 +41,000)
= $357.52

K = Total Small Group Claim PMPM *(weighting on projected member months provided)*
= ($289.50*17,000 + $244.25*18,000 + $280.14*41,000) / (17,000 + 18,000 + 41,000)
= $273.74

L = Total Small Group Quality Improvement PMPM = J * 0.01 = $3.58

M = Total Small Group Taxes/Fees PMPM = J * 0.02 = $7.15

6. Continued

Small Group MLR = (K + L) / (J – M)
= ($273.74 + $3.58) / ($357.52 – $7.15) = **79.1%**

Part (ii): Actions that would reduce member rebates include:

- Increase claims expense by adjusting plan benefits to increase insurer's liability
- Increase quality improvement expense by implementing a new wellness program
- Decrease premiums by managing admin expenses

7. Learning Objectives:

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

Learning Outcomes:

(4b) Describe benefits and eligibility requirements for Social Security, including disability income.

Sources:

Group Insurance 7th Chapter 9 pp 145-147

Individual Health Insurance 2nd Chapter 2 p 68

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List the notable exceptions to Social Security coverage for U.S. workers.

Commentary on Question:

Most candidates obtained full credit for this part.

1. Federal employees hired before 1984
2. State and local government employees covered by retirement plans similar to Social Security
3. Those with religious objections to government programs
4. Railroad employees
5. Certain agricultural (farm) and domestic workers

(b) Determine if these individuals qualify for Social Security Disability Insurance. Justify your answer.

Commentary on Question:

Candidate must indicate the reason for qualification (or otherwise) in order to obtain full credit. Many candidates correctly identified the individuals who qualified for the disability benefit but did not obtain full credit because the candidate did not provide adequate support to their answer.

1. Grace qualifies for disability because she has 12 credits and accumulated 6 over the last 12 quarters
2. Jerry qualifies for disability because he has 12 credits and half of them were accumulated after age 21
3. Janis does not qualify for disability. While she has earned 64 credits she did not accrue 20 over the last 40 quarters before disability onset.

7. Continued

(c) Assume a worker qualifies for Disability-Insured status.

(i) Describe the issues involved in determining whether the worker can receive disabled-worker benefits.

(ii) Describe how the worker, once receiving disabled-worker benefits, can lose those benefits.

Commentary on Question:
For part (i), many candidates only wrote something similar to "cannot perform any SGA" without differentiating between points 1 and 2 below. Very few candidates mentioned the other three points – claim denial was the most common other answer.

For part (ii) many candidates wrote "return to work instead of "remaining disabled". There were numerous references to fraud and illegal immigrants but neither were in the solution, although fraud is a common sense answer. As with part (i) the other points were hardly mentioned.

For both parts there was a lot of incorrect speculation as to what the answers were.

(i)

1. Unable to engage in any "substantial gainful activity" (SGA) because of a physical or mental impairment that has lasted or is expected to last for 12 months or to result in prior death.
2. Unable to engage in SGA <u>in any job</u> that exists in the national economy, regardless of whether he or she would be hired for such a job, if it exists.
3. Disability determination is required to take into account the worker's age, education and work experience.
4. A large percentage of initial claims are denied and appealed
5. Disabled-worker benefits are paid after a waiting period of five full calendar months.

(ii)

1. Periodic review to see whether they remain disabled according to the definition in the law.
   ("returned to work" is also accepted as an answer)
2. Reviews are required approximately every three years, time frame is flexible depending on the medical condition.
3. SSA must establish that a disabled beneficiary's condition has improved before he or she can be removed from the benefit rolls
4. Go on Social Security at retirement age.

7. Continued

(d) Describe what risk SFO needs to consider when accounting for a possible benefit from Social Security Disability Insurance, and how SFO can mitigate this risk.

Commentary on Question:
Candidates did not perform well in Part (d).

1. Overinsurance – Greater total income after disability (Disability plus SSDI) than before), causing no incentives for recovery
2. Offsets designed to maintain a targeted replacement ratio
3. Base policies at face mounts that assume the insured will receive payments under Social Security
4. Optional benefits can be added to the base policy with additional payments that pay if a claimant is considered disabled by the insurer but not by Social Security
5. American Beauty could help the insured pursue appeals of the Social Security decision if the claimant is initially denied for OASDI benefits.

8. 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 life and 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:

(1b) Describe each of the coverages listed above.

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

(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:

Group Insurance, Ch. 5; Handbook of Employee Benefits, Ch. 2

Commentary on Question:

This question was testing candidates' understanding of employee benefit plans, their design, and appropriate coordination of benefits across more than one plan. Candidates who struggled with this question applied the benefits from each of John's and Rebecca's plans independently across each claim, rather than coordinating the benefits on each claim.

Solution:

(a) Describe the functional approach for employee benefit plan design.

Commentary on Question:

Maximum credit was awarded for providing at least 8 of the 12 steps below. Most candidates were successful at describing at least 8 of the steps in the functional approach.

- Classify Employee needs in functional categories
- Classify the categories of persons
- Analyze the current benefits in terms of the functional categories of needs and the categories of employees that the employer wants to benefit

8. Continued

- Determine any gaps in benefits in terms of the functional categories of needs and employees
- Consider recommendations for changes in the benefit plan to meet any gaps or overlapping in benefits
- Estimate cost savings from each recommendation above
- Evaluate alternative methods of financing or securing the benefits above
- Consider other cost savings techniques
- Decide upon the appropriate benefits, methods of financing, and sources of benefits
- Implement the changes
- Communicate benefit changes to employees
- Periodically reevaluate the benefit plan

(b) Describe the general purposes served by having the employees share in the cost of the plan.

Commentary on Question:
Maximum credit was awarded for providing at least 2 of the 3 purposes below. A description for each purpose was required to receive credit. Candidates more often identified the first 2 purposes as opposed to the last.

- Control of utilization: EEs are more aware of their behavior which reduces the volume of unnecessary services
- Control of costs: reduces plan costs leading to lower premiums
- Control of risk to the insurer: makes the cost a more insurable risk.

(c) Determine which parent's plan is first payer for Owen. Show your work.

Commentary on Question:
Candidates who showed the accumulation of cost sharing across both benefit plans were able to identify the correct answer and receive maximum credit.

John's 2/20 $300 claim:
John's plan (1st payer):
$300 toward individual (John) & family deductible
Rebecca's plan (2nd payer):
plan pays: ($300 - $250) * 0.80 = $40 (John deductible is met)
member OOP: $300 - $40 = $260
Rebecca's 3/6 $400 claim:
Rebecca's plan (1st payer):
plan pays: ($400 - $250) * 0.80 = $120
(Rebecca deductible and family deductible are now met)
member OOP: $400 - $120 = $280

8. Continued

John's plan (2nd payer):
$280 toward individual (Rebecca) & family deductible

Owen's 4/30 $500 claim:
Rebecca's $500 family deductible has been met.
John's $1,000 family deductible has not been met ($420 remains)
If Rebecca's plan is first payer: Rebecca's plan pays: $500 * 0.80 = $400
Remaining $100 goes towards John's family deductible
If John's plan is first payer: John's plan pays: ($500 - $420) * 0.80 = $64
Remaining $436 is sent to Rebecca's plan: $436 * 0.80 = $369
Total paid by both plans would be $433.

Based on the claims history provided in the question, Rebecca's plan is the first payer for Owen.

(d) Determine the plan that John selected. Assume the deductible counts toward any out of pocket maximums. Show your work.

Commentary on Question:
None of John's plans matched the benefit payments provided in the question, therefore points were only awarded for showing the correct coordination of benefits for each claim, not for determining the plan John selected. Most candidates who were successful in part c were also successful in part d.

Benefits are coordinated for the first three claims in part (c).
John's 5/1 $200 claim:
John's plan (1st payer):
$200 toward individual deductible & family deductible;
$500 individual deductible is now met with first claim of $300
$880 ($300 + $280 + $100 + $200) of $1,000 family deductible has been met
Rebecca's plan (2nd payer):
plan pays: $200 * 0.80 = $160
member OOP: $200 - $160 = $40
Owen's 5/30 $700 claim:
Rebecca's plan (1st payer):
plan pays: $700 * 0.80 = $560 (family deductible already met)
member OOP: $700 - $560 = $140
John's plan (2nd payer):
$120 toward meeting the $1,000 family deductible
plan pays: ($140 - $120) * 0.80 = $16
member OOP: $140 - $16 = $124

8. Continued

(e) Determine which of John's plans would minimize the family's out-of-pocket costs next year. Show your work.

Commentary on Question:
Candidates who struggled with this part were unsuccessful coordinating the benefits from each of John's and Rebecca's plans across each claim. Partial credit was awarded if candidates who recognized that Plan 3 was correct given John's second large claim alongside the low OOP max (up until the last claim, plan 3 actually maximizes the family's out-of-pocket costs).

Plan 1:
- John's 2/20 $3,000 claim:
  - John's plan (1st payer):
    - plan pays: ($3,000 - $500) * 0.80 = $2,000
    - remaining amount sent to 2nd plan: $3,000 - $2,000 = $1,000
  - Rebecca's plan (2nd payer):
    - plan pays: ($1,000 - $250) * 0.80 = $600
    - member pays: $1,000 - $600 = $400
- Rebecca's 3/6 $1,500 claim:
  - Rebecca's plan (1st payer):
    - plan pays: ($1,500 - $250) * 0.80 = $1,000
    - remaining amount sent to 2nd plan: $1,500 - $1,000 = $500
  - John's plan (2nd payer):
    - $500 toward meeting the individual & family deductibles
- Owen's 4/30 $1,500 claim:
  - Rebecca's plan (1st payer):
    - plan pays: $1,500 * 0.80 = $1,200 (family deductible already met)
    - remaining amount sent to 2nd plan: $1,500 - $1,200 = $300
  - John's plan (2nd payer):
    - plan pays: $300 * 0.80 = $240 (family deductible already met)
    - member pays: $300 - $240 = $60
- John's 5/1 $24,000 claim:
  - John's plan (1st payer):
    - plan pays: $24,000 * 0.80 = $19,200
    - remaining amount sent to 2nd plan: $24,000 - $19,200 = $4,800
  - Rebecca's plan (2nd payer):
    - plan pays: $4,800 * 0.80 = $3,840
    - member pays: $4,800 - $3,840 = $960
- Total OOP = $400 + $500 + $60 + $960 = $1,920

Plan 2:
- John's 2/20 $3,000 claim:
  - John's plan (1st payer):
    - plan pays: ($3,000 - $500) * 0.70 = $1,750
    - remaining amount sent to 2nd plan: $3,000 - $1,750 = $1,250

8. Continued

Rebecca's plan (2nd payer):
plan pays: ($1,250 - $250) * 0.80 = $800
member pays: $1,250 - $800 = $450

Rebecca's 3/6 $1,500 claim:
Rebecca's plan (1st payer):
plan pays: ($1,500 - $250) * 0.80 = $1,000
remaining amount sent to 2nd plan: $1,500 - $1,000 = $500
John's plan (2nd payer):
$500 toward meeting the individual & family deductibles
Owen's 4/30 $1,500 claim:
Rebecca's plan (1st payer):
plan pays: $1,500 * 0.80 = $1,200 (family deductible already met)
remaining amount sent to 2nd plan: $1,500 - $1,200 = $300
John's plan (2nd payer):
plan pays: $300 * 0.70 = $210 (family deductible already met)
member pays: $300 - $210 = $90
John's 5/1 $24,000 claim:
John's plan (1st payer):
member pays: min($1,250, $24,000 * 0.30) = $1,250
($1,250 from John's first claim and $1,250 from this claim meets John's individual OOP max)
plan pays: $24,000 - $1,250 = $22,750
remaining amount sent to 2nd plan: $1,250
Rebecca's plan (2nd payer):
plan pays: $1,250 * 0.80 = $1,000
member pays: $1,250 - $1,000 = $250
Total OOP = $450 + $500 + $90 + $250 = $1,290

Plan 3:
John's 2/20 $3,000 claim:
John's plan (1st payer):
member pays: min($1,500, $500 + ($3,000 - $500) * 0.50) = $1,500 (John's OOP max is met)
plan pays: $3,000 - $1,500 = $1,500
remaining amount sent to 2nd plan: $1,500
Rebecca's plan (2nd payer):
plan pays: ($1,500 - $250) * 0.80 = $1,000
member pays: $1,500 - $1,000 = $500

8. **Continued**

Rebecca's 3/6 $1,500 claim:
- Rebecca's plan (1st payer):
  - plan pays: ($1,500 - $250) * 0.80 = $1,000
  - remaining amount sent to 2nd plan: $1,500 - $1,000 = $500
- John's plan (2nd payer):
  - $500 toward meeting the individual & family deductibles

Owen's 4/30 $1,500 claim:
- Rebecca's plan (1st payer):
  - plan pays: $1,500 * 0.80 = $1,200 (family deductible already met)
  - remaining amount sent to 2nd plan: $1,500 - $1,200 = $300
- John's plan (2nd payer):
  - plan pays: $300 * 0.50 = $150 (family deductible already met)
  - member pays: $300 - $150 = $150

John's 5/1 $24,000 claim:
- John's plan (1st payer):
  - John's first claim met his OOP max so the plan pays $24,000. The member pays $0.

Total OOP = $500 + $500 + $150 + $0 = $1,150

Plan 3 minimizes the family's out-of-pocket costs.

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

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

Learning Outcomes:

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

(2a) Identify and evaluate sources of data needed pricing, including the quality, appropriateness and limitations of each data source.

(2b) Develop an experience analysis.

(2d) Calculate and recommend a manual rate.

Sources:

Skwire, Ch 5, 21; Individual Health Insurance, Ch 5,

Commentary on Question:

Question attempts to test the exam taker's ability to

1) Understand the Plan Design requirements of the ACA
2) Use given data to adjust an index rate for morbidity by combining population data/assumptions to ensure selection impacts are not financially determental.

Solution:

(a) Describe the different types of cafeteria plans available.

Commentary on Question:

Candidates got a quarter point for each of the bullet points up to a maximum of one point. Providing additional detail around any of the bullets did not result in additional credit. Providing detail without providing the major bullets did not result in credit. Many candidates provided EHB and pre-existing exclusion answers. Mental Health Parity and OOP Maximums were rarely mentioned.

9. Continued

- Coverage of Preventative services at zero cost share to the member
- Prohibition of lifetime and annual limits
- Limits on OOP Maximums when using In Network benefits
- SG and Individual plans must cover Essential Health Benefits
- Prohibition of exclusions based on pre-existing conditions
- The ACA extended federal mental health parity requirements to the small employer and individual marketplaces.

(b) The Index Rate under the ACA is defined as the expected average allowed PMPM claims for essential health benefits of the carrier's entire book of ACA products. Calculate a recommended morbidity adjustment that can be applied to the Index Rate. Show your work.

Commentary on Question:
Many candidates used the proper data from the case study (incurred claims) for the PPO, Quantum and HMO. Some used the Paid claims instead and did not receive full credit. Almost all used the correct membership. Not excluding the Non-EHB claims resulted in not receiving full credit. Other common errors included:1) Not using the Paid to Allowed to convert Incurred to allowed. 2) Taking a straight average of PPO and HMO PMPMs instead of a member weighted average. 3) Multiplying by the age/gender factors instead of dividing. 4) Providing the morbidity adjustment as assumed distribution average PMPM prior to age/gender adjustment dividing by assumed distribution average PMPM post age/gender adjustment. All of these resulted in less than full credit. Lastly, credit was not given for trending claims to 2017 levels as the trend would have resulted in being divided out in the final morbidity adjustment calculation.

Steps:
1) Pull correct Member Months and Incurred claims from case study (i) and (ii)
2) Find Paid PMPMs (iii)
3) Find allowed PMPM by dividing by Paid to Allowed Ratio (v)
4) Subtract out Non-EHBs (vii)
5) Blend together HMO and PPO on Member Months to find EHB Allowed for current Individual plans (equals $349.89)

	(i)	(ii)	(iii) = (ii)/(i)	(iv)	(v) = (iii)/(iv)	(vi)	(vii) = (v)-(vi)
	MM	Incurred Claims	Paid PMPM	Paid to Allowed Ratio	Total Allowed	Non-EHB Allowed	EHB Allowed
HMO Individual	74,055	19,482,802	$263.09	71.50%	$367.95	$2.76	$365.19
PPO Individual	21,153	5,469,488	$258.57	86.20%	$299.96	$3.65	$296.31
					$352.85	$2.96	$349.89
Quantum III Individual	52,998	15,919,661	$300.38	85.00%	$353.39	$1.25	$352.14

9. Continued

6) Divide each sub-segment of the population by the given Age/Gender factor (iv)
7) Use the assumed distribution of enrollment from the question to find the future market average (vi)
8) Divide the market average by the current Individual PMPM to find the morbidity ratio (vii)

	Using EHB Allowed				
	From Q (i)	*From Q (ii)*	*2 From Q and 2 Calculated in Part A (iii)*	*(iv) = (iii)/(ii)*	
	Enrollment	A/G	Allowed PMPM	Normalized for A/G	
Existing ACA Products	5.00%	1.015	$349.89	$344.72	(v)
Uninsured	20.00%	1.256	$472.31	$376.04	
Quantum Legacy III Indi	29.00%	1.004	$352.14	$350.74	
Other Carriers	46.00%	1.085	$398.65	$367.42	
Market average				$363.17	(vi) = Sumproduct (iv) & (i)
Ratio to current ACA products				1.054	(vii) = (vi)/(v)

10. Learning Objectives:

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

Learning Outcomes:

(2d) Calculate and recommend a manual rate.

Sources:

Skwire Chapters 25 & 26

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List and describe key characteristics that should be considered when pricing group LTD and group LTC plans.

Commentary on Question:

In order to receive full credit on the question candidates needed to 1) distinguish between LTD and LTC and 2) describe the characteristics listed.

- Age/Gender: maternity may impact LTD, LTC is issue age rated (increase for older issue ages) and females have a steeper slope and higher utilization
- Group size: in LTD highest claim costs occur for largest and smallest groups (U shaped cost curve)
- Participation factors: antiselection at low participation rates for both LTD and LTC
- Marital status: LTC (lower cost for married couples, consideration in composite rating)
- Area: LTD has significant variation by area, LTC services vary by region: in Midwest – nursing homes, in Florida – home care services

(b) Evaluate whether your company will win the business. Show your work.

Commentary on Question:

Few candidates were awarded full credit for part B. Common issues were not considering the elimination period, misapplication of continuance factors, and not using given claim costs for Thunderball. Partial credit was given where candidates used a two year calculation period instead of a three year calculation period.

10. Continued

$$Cost = Incidence \times \sum(Benefit_t \times Continuance_t \times Discount_t)$$

XYZ

	Year 1	Year 2	Year 3
Benefit	(365-90) * 100 = $27,500	$36,500	$36,500 - $27,500 = $9,000

Termination by Duration

	Year 1	Year 2	Year 3
F37	.9*0.42 = 0.378	0.9*0.35 = 0.315	0.9*0.22 = 0.198
M47	0.370	0.250	0.150
F52	.9*0.34 = 0.306	0.9*0.21 = 0.189	0.9*0.13 = 0.117

Continuance = 1 - Termination

	Year 1	Year 2	Year 3
F37	1 - 0.378 = 0.622	0.622 * (1 - 0.315) = 0.4261	0.4261 * (1 - 0.198/4) = 0.4050
M47	1 - 0.370 = 0.630	0.630 * (1 - 0.250) = 0.4275	0.4275 * (1 - 0.150/4) = 0.4548
F52	1 - 0.306 = 0.694	0.694 * (1 - 0.189) = 0.5268	0.5268 * (1 - 0.117/4) = 0.5464

Note: Benefit during year 3 extends only one-quarter (3 months) into the year

F37: $0.0018 * \{\$27{,}500 * 0.622 * (1.035)^{-1} + \$36{,}500 * .4261 * (1.035)^{-2} + \$9{,}000 * 0.4050 * (1.035)^{-2.25}\} = \$61.95$
M47: $69.59
F52: $84.34

Year 1: $61.95 * .35 + $69.59 * .30 + $84.34 * .35 = $72.08
Year 2: $61.95 * .50 + $69.59 * .35 + $84.34 * .15 = $67.98

Thunderball

Year 1: $73.00 * .35 + $67.09 * .30 + $82.25 * .35 = $74.46
Year 2: $73.00 * .50 + $67.09 * .35 + $82.25 * .15 = $72.32

Present Value of Savings

XYZ costs minus Thunderball costs, discounted at IRR of 15%

Year 1: ($2.39) * $1.15^{-.5} = ($2.23)$
Year 2: ($4.34) * $1.15^{-1.5} = ($3.52)$

XYZ will win the business because it will save the company money.

11. Learning Objectives:

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

Learning Outcomes:

(2c) Calculate and recommend assumptions.

Sources:

Group Insurance, Bluhm, Chapter 34 (pages 599-606)

GHC_105_13 Pricing Considerations for Drugs Covered Under Pharmacy Benefit Programs

Commentary on Question:

There we candidates who received a large number of points on this question – it was very possible, just came at the end of a long day and some people obviously ran out of time. There were a couple common errors that led to about half credit, though.

Solution:

(a) Explain the components of health insurance pricing trends and how each applies to prescription drugs.

Commentary on Question:

In section a, candidates did reasonably well as long as they included all of the trend components (recite list) AND state what unit cost and utilization mean to pharmacy (trend in cost of the drug/AWP and trend in the number of scripts per member).

- Unit cost trend – Change in the cost of services. Represents unit cost trend on a fixed market basket, severity, and mix of services. For pharmacy this would be the cost of the drugs (AWP).
- Utilization trend – Change in the utilization of services. For pharmacy this would be the number of drugs used by members.
- One time changes – Such as legislation, high flu season, internal issue. For pharmacy this could be impact of a new drug or high flu.
- Expected population shifts – Demographic, geographic mix.
- Structural changes – Change in cost structure. For pharmacy this could be PBM contract changes that impact discounts/dispensing fees.
- Capitation or Large claims impact

11. Continued

(b)

(i) (*2 points*) Calculate the expected PMPM claims cost for 2017 under the current PBM contract terms. Show your work.

(ii) (*5 points*) Calculate the expected 2017 savings under each PBM contract proposal. Show your work.

(iii) (*1 point*) Define potential criteria for awarding the contract and recommend a proposal for approval. Justify your recommendation.

Commentary on Question:
In section b, the key was to convert AWP total dollars to AWP per script, then trend that AWP per script by cost trend and trend the scripts by utilization trend. Many candidates trended the total AWP dollars by cost trend only – but utilization trend would have applied to total dollars as well. A large number of candidates did calculate the expected cost of the new drug correctly, but there were many candidates that didn't even attempt the new drug calc. There were many moving parts in this section, so the candidates had to be careful to apply the correct discounts and dispensing fees to the 3 different 2017 claims cost calcs. For the recommendation, many candidates simply mentioned which proposal was cheaper using exact given data. Question is looking for candidates to think about other justifications for staying or switching – think about future drug mix changes, rebates, utilization management, member disruption, etc.

Calculate AWP per script to use in the calculations
2015 Experience

	Brand	Generic	Specialty
AWP per script = 2015 AWP / 2015 Scripts			
Retail	210.00	102.00	2,044.98
Mail	700.00	219.99	3,628.94

2017 Calculations
Calculate the following for each Brand/Generic/Specialty – Retail/Mail Combo:
2017 AWP per script = 2015 AWP per script * (1+unit cost trend)^2
2017 Scripts = 2015 Scripts * (1+utilization trend)^2
2017 Allowed = (AWP per script *(1 - Discount) + Disp Fee) * Scripts

11. Continued

2017 New Drug Scripts = prevalance rate (180/100,000) * total membership (120,000) * % of patients that will take the drug (50%) * number of months they will take it (depends on release date)
For sections i) and ii):

	AWP per script	Scripts		Current Contract Terms:		Current PBM Proposal:		Competitor PBM Proposal:
Retail:								
Brand	$272.91	166,489		$38,822,143		$38,011,903		$38,560,965
Generic	$110.32	898,186		$28,372,643		$26,688,103		$25,670,832
Specialty	$2,611.24	2,328		$5,160,094		$5,098,128		$5,140,107
Retail total:				$72,354,881		$69,798,134		$69,371,904
Retail PMPM:				$50.25		$48.47		$48.17
Mail:								
Brand	$909.72	7,904		$5,741,550		$5,644,128		$5,716,028
Generic	$237.94	49,488		$2,779,564		$2,543,462		$2,472,810
Specialty	$4,633.79	8,952		$35,596,993		$35,260,652		$35,675,483
New Drug	$750.00	1,296		$834,624		$826,200		$835,920
Mail total:				$44,952,730		$44,274,441		$44,700,240
Mail PMPM:				$31.22		$30.75		$31.04
Total				**$117,307,611**		**$114,072,576**		**$114,072,145**
Total - PMPM				**$81.46**		**$79.22**		**$79.22**
Savings						**-$2.25**		**-$2.25**
Total without New Drug				$116,472,987		$113,246,376		$113,236,225
Total - PMPM without new drug				$80.88		$78.64		$78.64
New Drug by itself				$0.58		$0.57		$0.58
Savings						-$2.24		-$2.25

(iii) The savings is basically the same between the Current and the Competitor proposals. There are likely to be costs associated with moving to another PBM. Also the specialty discounts are better with Current PBM proposal, and specialty drugs are becoming a higher part of overall pharmacy spend each year. I recommend sticking with Current PBM.

12. 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.

(6c) Apply applicable standards of practice.

Sources:

Handbook of Employee Benefits, Ch 24

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) List the general characteristics that make the communication of benefit programs challenging and describe how those characteristics may or may not apply to Company XYZ.

Commentary on Question:

Majority of the students fared well on this question. They were asked to identify the challenges and apply to XYZ. The regulatory requirements portion was answered the least. Some students focused on actual communication (i.e.: email, mail) vs general characteristics of communication and thus missed the point of the question.

1. The workforce is diverse in composition, with various levels of education, financial sophistication and interest in understanding plan provisions.
   Company XYZ employs a wide variety of workers, from software developers who are likely to be highly-educated to warehouse workers who may only have a high school education.

2. Some benefits are of little interest to a majority of employees until point of use.
   Company XYZ, for example, has a disability income plan which tends to be a benefit that is not truly understood until the use of the benefit is needed.

3. Multiple regulatory requirements often affect plan features and lead to confusion.
   Company XYZ is a global firm, and each country has their own regulatory environment to consider.

4. Language barriers and plan complexity can also contribute to the challenge.

12. Continued

(b) Assess whether the SPD meets the ERISA-specified minimum standards to be considered a bona fide SPD. Assume the plan is subject to Title I of ERISA. Justify your position.

Commentary on Question:
This question was mixed in responses. Some outlined the items below, but some listed multiple items that weren't relevant. Those who identified the appeal and Legal process tend to fare better than those who didn't. No candidate discussed the timeline for SPD which is covered in rubric and related to the question but not explicitly asked in the question.

The SPD must contain the following information

The requirement to describe how a participant covered by the plan can make a claim for benefits.
Does SPD meet standard? YES

The procedure for appeal if a participant's claim for benefits is denied.
Does SPD meet standard? NO

The name and address of the person(s) to be served with legal process should a legal action be instituted against the plan.
Does SPD meet standard? NO

General description of provider network
Does SPD meet standard? NO

Description of COBRA rights
Does SPD meet standard? NO

(c)

(i) Determine the date by which you must issue the COBRA rights to your severed employees. Justify your response.

(ii) Determine the date by which you must issue the SMM. Justify your response.

12. Continued

Commentary on Question:
This part of the question was very poorly answered. For the most part, candidates understood that COBRA right should be issued, but couldn't identify when. Many were also confused of "issuing" vs. "communicating" the COBRA rights, which has different timelines. Answers for (i) ranges from 2 months before to 3 months after the date of termination. Part (ii) was poorly answered and only a few candidates got part marks. Overall, not one candidate got full marks on c).

(i) There is a notification requirement when the employee experiences a qualifying event, such as termination from employment. Since the layoffs occurred two months after the issuance of the SPD, the date by which it should be issued is approximately November 30th.

(ii) The SMM is required to be issued within 210 days after the plan year in which the material modification was adopted, which is reduced to 60 days for plans that make "material reduction" in covered services or benefits. Considering that this plan has overhauled its benefits plan, the 60-day rule would likely apply.
The plan is currently one month prior to the start of the plan year, so the date by which the SMM should be issued is approximately February 28th.