GH CORC Model Solutions
Fall 2013

1.

Learning Objectives:
4. Describe Government Programs providing Health and Disability Benefits.

Learning Outcomes:
(4a) Describe benefits and eligibility requirements for social programs in Canada.

(4c) Compare social programs in Canada and the U.S.

Sources:
Bluhm Ch 13, Morneau Ch 15

Commentary on Question:
To receive maximum points candidates actually had to compare the differences between Canada and US and not just list both.

Solution:
(a) Describe and compare the eligibility criteria applicable to government health care programs in Canada and the U.S.

Canada
1. All permanent residents of a province or territory are eligible
2. A person who moves from one province to another becomes eligible as soon as coverage terminates under the plan of their former province of residence

US Medicare
1. Part A
   a. At least age 65 with 40 Social Security (SS) credits
   b. If disabled, must have been eligible for SS or RR disability benefits for at least 24 months
   c. People with end stage renal disease (ESRD) who have paid Medicare taxes for 40 credits
2. Part B
   a. If covered by Part A, eligible for Part B
   b. Requires payment of a monthly premium
3. Part C & D
   a. Based on eligibility from Part A and B

1. Continued

US Medicaid

1. Adults and children below certain income and asset criteria set by State

Comparison:

1. In Canada, the government healthcare program is available to most of the residents, whereas in the US, the government programs are not available to most people below age 65.
2. Above age 65, it appears that coverage is fairly similar as most people are covered.

(b) Outline how government health care programs are funded in Canada and in the U.S.

Canadian Medicare

1. Cost is borne by each province
2. Financed through general revenues, special payroll taxes, premium levies and transfer payment from the Federal government
3. For a province to be eligible for federal funding, need to comply with five principles of Canada Health Act
4. Extra billing and user charges are discouraged through the reduction of federal grants on a dollar-per-dollar basis

US Medicare

1. Part A – payroll taxes
2. Part B/D – general taxes (75%) and beneficiary premiums (25%)

US Medicaid

1. Each state finances its own program with substantial support from Federal Government
2. Source of funding is general tax revenues

2. Learning Objectives:

3. The candidate will understand how to recommend an employee benefit strategy.

4. Describe Government Programs providing Health and Disability Benefits.

Learning Outcomes:

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

(4b) Describe how private group insurance plans work within the framework of social programs in Canada.

Sources:

Canadian Handbook of Flexible Benefits, 3rd Edition, McKay

- Chapter13 Discrimination Issues

GHC-630-13: Tacess Issue 1 – January 2013 – An Advisor's Guide to Understanding How Taxes Impact Group Insurance Benefits in Canada

GHC-626-13: Guideline G4 – Coordination of Benefits

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) One of Joey Bats' competitors in Ontario recently faced legal challenges based on discrimination. Joey Bats would like information on discrimination laws in Ontario, and an assessment of any risks based on the current plan design. Draft your response.

Commentary on Question:

Candidates did a great job of identifying the discrimination considerations related to age, gender and smoking status within the plan design, premium rates and cost sharing. Candidates however seemed to accept that Health, Travel and Dental rates should vary by marital status without commenting on why that may be acceptable and what it may imply.

The discrimination issues that could be discussed include:

Age

- Health plan ends at age 65 – which clearly discriminates against older employees
- Life insurance/Disability – given that the same plan is offered to everyone, employer paying more for older employees and male employees

2. Continued

Gender

- Life insurance premium rates vary by gender.
- Medical/dental – employers pay more for female?

Smoker status

- Medical premium rate varies based on smoker status

Marital status

- Same premium regardless of marital status (employer paying more for single employees, single employees subsidizing those with families).
- In B.C., Ontario, Quebec, Alberta, and the federal gov't, having employer contributions vary by marital status is permissible. However, in other provinces, this would be considered discrimination based on marital status (page 271 of McKay).

(b) Calculate the annual taxes payable by each of John and Jacques as a result of premium payments under Joey Bats' plan. Show your work.

Commentary on Question:
Part (b) of this question required the candidate to correctly identify and evaluate what benefits are taxable benefits taxes in each province and to evaluate the amount of the taxable benefits correctly applying the cost sharing and the associated tax amounts. While it was not necessary to split the provincial and federal tax amount to receive full credit, it was necessary to correctly calculate the total amount of tax payable to receive full credit.

Illustration for John:
John lives in BC. As a result, the group life insurance is a taxable benefit both federally and provincially.
Taxable benefit: $0.20 * 12 * (60 * 2) * 50% = $144

The annual taxes owing for John are:

- Federal taxes: 22% * 144 = $31.68
- Provincial taxes: 10% * 144 = $14.40

Illustration for Jacques:
Jacques lives in Quebec. As a result both the group life insurance and the medical/dental benefits are taxable. However, the medical/dental benefits are only taxable provincially.
The candidate was also required to know and understand that provincial sales tax applied on the calculation of the premium and therefore on the taxable benefit attributable to the member.

2. Continued

Taxable benefit - life insurance: $0.20 * 12 * (90 * 2) * 1.09 * 50% = $235.44
Taxable benefit – medical/dental benefits: ($125 + $100) * 12 * 1.09 *50% = $1,471.50

The annual taxes owing for John are:

- Federal taxes (only on life insurance): 22% * 235.44 = $51.80
- Provincial taxes: 23% * (235.44 + 1,471.50) = $392.60

(c)

(i) Determine changes to achieve optimal results for Joey Bats and John. Show your work.

(ii) Determine changes to achieve optimal results for Joey Bats and Jacques. Show your work.

(iii) Explain why the results may be different for John and Jacques.

Commentary on Question:
Candidates tended to miss the application of the 9% sales tax in the calculation of the taxable benefit.
Since John and Jacques live in different provinces the ability to optimize the tax payable is different.

The candidate should establish the current costs for John and for Jacques to establish/prove optimal results:

Current Plan Cost John:

$60,000 Annual Salary
22% Federal Marginal Tax Rate
10% Provincial Marginal Tax Rate
0% Sales Tax Rate

	Rate	Volume	ER Cost Sharing	ER Annual Cost	EE Annual Cost	EE Tax
Life	0.2	$120,000	50%	$144	$144	$46
LTD	1.84	3,333	50%	$368	$368	$0
Health	125	1	50%	$750	$750	$0
Dental	100	1	50%	$600	$600	$0
				$1,862	$1,862	$46

2. Continued

1. Make the employee pay 100% of life insurance to reduce taxable benefit which is the only taxable benefit in BC.
2. Modify the Long-Term Disability to 100% employee-paid, as the presence of any employer contributions renders the benefits taxable
3. Balance total cost with Medical and/or Dental.

	Rate	Volume	ER Cost Sharing	ER Annual Cost	EE Annual Cost	EE Tax
Life	0.2	$120,000	0%	$0	$288	$0
LTD	1.84	$2,267	0%	$0	$500	$0
Health	125	1	69%	$1,035	$465	$0
Dental	100	1	69%	$828	$372	$0
				$1,863	$1,625	$0

Note by changing the LTD plan to 100% EE Paid the benefit becomes non-taxable. Sharp candidates noticed this fact and adjusted the benefit volume to keep the *same net benefits*.

Current Plan Cost Jacques:

	$90,000	Annual Salary
	22%	Federal Marginal Tax Rate
	23%	Provincial Marginal Tax Rate
	9%	Sales Tax Rate

	Rate	Volume	ER Cost Sharing	ER Annual Cost	EE Annual Cost	EE Tax
Life	0.2	$180,000	50%	$235	$235	$106
LTD	1.84	5,000	50%	$602	$602	$0
Health	125	1	50%	$818	$818	$188
Dental	100	1	50%	$654	$654	$150
				$2,309	$2,309	$444

1. As Medical/Dental and Life Insurance are taxable benefits in Quebec. It would be optimal to limit the amount Joey Bats pays for these benefits.
2. Make the employee pay 100% of life insurance to reduce taxable benefit.
3. Make the Long-Term Disability to 100% employer-paid,
4. Balance total cost with Medical and/or Dental.

2. Continued

	Rate	Volume	ER Cost Sharing	ER Annual Cost	EE Annual Cost	EE Tax
Life	0.2	$180,000	0%	$0	$471	$0
LTD	1.84	$5,000	100%	$1,203	$0	$0
Health	125	1	0%	$0	$1,635	$0
Dental	100	1	84%	$1,105	$203	$254
				$2,308	$2,309	$254

(d) Over the course of the next year, Joey Bats is considering changing its insurer. State the insurance company requirements related to continuation of coverage should Joey Bats change insurers.

- Any person insured under the old contract should continue to receive coverage under the new contract, if their coverage in the old contract terminated and they are eligible under the terms of the new contract.
- No member who was insured in the old contract should be ineligible under the replacing contract solely because the member was not actively at work on the effective date of the replacing contract.
- The insurer of the replacing contract is permitted to require satisfactory evidence of insurability be submitted in respect of any coverage. However, where the insurer so requires, the replacing contract shall not become effective until after the evidence of insurability required by the replacing insurer has been approved by it.
- An insurer shall make a reasonable effort to determine whether a contract of group insurance it is proposing to issue is a replacing contract, and if so, what responsibilities it has under this Guideline. As long as it does so, nothing in the CLHIA Guidelines shall prevent an insurer from withdrawing its contract of group insurance or revising its premiums if the insurer has been given incorrect information or has been misled with respect to amounts of coverage or other data pertinent to the insurer's risk.
- Where any benefits are required to be payable by the terminating insurer, the replacing insurer is not required to pay such benefits.

3. **Learning Objectives:**

4. Describe Government Programs providing Health and Disability Benefits.

7. Understand and evaluate Retiree Group and Life Benefits in Canada.

Learning Outcomes:

(4b) Describe how private group insurance plans work within the framework of social programs in Canada.

(7c) Determine employer liabilities for retiree benefits under various accounting standards.

Sources:

GHC-104-13: CIA Note – Overview of Post-Retirement Benefit Calculations

GHC-605-13: CIA Perspectives – National Pharmacare Coverage

GHC-609-13: Ontario Generic Drug Pricing Reforms Finalized

Morneau Shepell Handbook of Canadian Pension & Benefit Plans, 15th Edition, Gottlieb & Whiston

- Chapter 22 Post-Retirment and Post-Employment Benefits

Commentary on Question:

Commentary listed underneath question component.

Solution:

(a) Compare and contrast 2010 drug reform in Ontario and Quebec.

Commentary on Question:

The question tests the differences and similarities between the 2010 reform in Ontario and Quebec in the three major areas including generic drug pricing, professional allowance fees and dispensing fees. Candidates were also expected to describe the differences between the public plan and the private plan. Most of the candidates were able to list a couple of points from the reading material but were having difficulties summarizing the results into three major areas and public vs. private.

1. Generic drug prices changes:

   For public plan:
   In Quebec, generic drug prices to be decreased to 25% of brand drug price over time. 37% at December 17, 2010, 30% at April 1, 2011, 25% at April 1, 2012. (was 60% before with a decrease to 54% for later issues). In Ontario, generic prices will drop to 25% of brand drug price (was 50% before). This 25% target came into effect 2 years earlier than in Quebec.

3. Continued

For private plan:
In Quebec, same changes as for public plans. In Ontario, generic prices to be decreased to 25% of brand drug price over time. 50% at July 1, 2010, 35% at July 1, 2011, 25% at July 1, 2012 (was unregulated before).

2. Professional allowances changes:
   For public plan:
   In Quebec, the maximum professional allowance will decrease over time. 16.5% of sales at April 1, 2011, 15% of sales at April 1, 2012. (was 20% of sales before). In Ontario, professional allowances will be eliminated (was 20% before). They are replaced with prompt payment discounts, volume discounts and distribution service fees.

   For private plan:
   In Quebec, same changes as for public plans. In Ontario, professional allowances will be eliminated gradually over time. 50% at July 1, 2010, 35% at July 1, 2011, 25% at July 1, 2012, 0% at July 1, 2013. (was unregulated before).

3. Dispensing fees and profit margins:

   For public plans:
   In Quebec, dispensing fees and profit margins are governed by an agreement between government and AQPP and therefore unchanged. In Ontario, pharmacies can mark-up drug prices by 8%, but capped at $125. Dispensing fee increase gradually from $8-$11 at July 1, 2010 to $8.83 to $13.25 at July 1, 2014 (was $7 before). There is a transition fee to pharmacists to compensate for pharmacy services.

   For private plans:
   In Quebec, dispensing fees and profit margins fluctuate according to the market and are unregulated. In Ontario, dispensing fees and profit margins also both remain unregulated. The difference between Ontario and Quebec is that in Ontario pharmacist fees are indicated on the costumer's bill, while in Quebec they are not required to be shown. This explains the difference in price paid by Quebec members of private plans versus in Ontario.

(b) Describe the areas of concern that a national pharmacare program could address and the program's potential impact on XYZ.

Commentary on Question:
The area that candidates had trouble was explaining the impact to XYZ based on the design of the national plan (e.g. 1st payer as opposed to 2nd payer).

3. Continued

In Canada, Medicare is currently administered at the provincial level. Therefore the cost, administration and design of the drug plan for XYZ employees in each province differ significantly, as XYZ's plan integrates with the provincial plans.

A national plan would remove the variation in design and administration, but the overall cost impact to XYZ would depend heavily on the design of the national plan adopted and which aspects of existing provincial plans are incorporated.

For example:

a) Should the national plan be publicly funded or should it mandate a minimum level of coverage under private plans and cover only uninsured individuals under the public scheme (like the current Quebec model): This would impact XYZ, especially in Ontario as they will now become 1st payer as opposed to 2nd payer.
b) Should the national plan provide a floor plan that could be topped up by private coverage like in Ontario: This would impact costs associated with employees in provinces like Quebec.
c) Should the national plan only cover catastrophic claims like the current model in BC, Saskatchewan and Manitoba: This would impact XYZ's operations in Ontario and Quebec for example.

The goal of the national plan would be to control the escalating costs of prescription drugs in Canada, and would aim to address the following areas of concern:

a) Inadequate drug coverage – which would imply a catastrophic plan model
b) Runaway inflation in drug costs

With a national plan, a national drug formulary would be established, and make possible the creation of a national buying agency with power to obtain the lowest possible purchase price. This would lead to new drugs with demonstrated therapeutic advantage to be added to the formulary, similar to British Columbia. With the drop in prices, this could have a positive impact on XYZ, as drug costs go down. However, manufactures would need to make up lost revenue by passing on losses to pharmacies, which in turn if the national plan does not regulate dispensing fees and profit margins on private plans, would pass it on to the employers like XYZ.

(c) Calculate the Projected Benefit Obligation, Accrued Benefit Obligation and Service Cost for each employee. Show your work.

Commentary on Question:
In general, candidates did well on this part of the question.

3. Continued

Total Projected Benefit Obligation (PBO) = the present value of the projected benefit stream payable from the retirement date.
Accrued Benefit Obligation (ABO) = PBO accumulated to date. Determined as the PBO multiplied by the rate of service to date divided by the total service.
Service Cost (SC) = the annual accrual of the remaining obligation and is determined as the PBO divided by the total service. If employee is past their full-eligibility date, then SC = 0.

Total cost = $1,000
ODB cost = $650
Net cost = Total per capita cost – ODB per capita cost = $1,000 - $650 = $350
Net cost at retirement age = Net cost x (1+ trend rate) ^ $^{(\text{Retirement age} - \text{Age})}$
Discount factor = (1 + discount rate) ^ $^{-(\text{Retirement age} - \text{Age})}$
Survival factor = (1 – termination rate) ^ $^{(\max[0,\ 55 - \text{Age}])}$
Age 65 annuity factor = 15
PBO = Net cost at retirement x Discount factor x Survival factor x Age 65 annuity factor
ABO = PBO x max [1, Service / (Full eligibility age – Age + Service)]
SC = PBO / (Full eligibility age – Age + Service) "= zero if Age >= Eligibility age"

Employee 1
Age = 35
Service = 0
Net cost at retirement age = $350 x (1 + 4.5%) ^ $^{(65 - 35)}$ = $1,310
Discount factor = (1 + 5.0%) ^ $^{-(65 - 35)}$ = 0.2314
Survival factor = (1 – 2.0%) ^ $^{(\max[0,\ 55 - 35])}$ = 0.6676
PBO = $1,310 x 0.2314 x 0.6676 x 15 = $3,036
ABO = $3,036 x 0 / (55 – 35 + 0) = $0
SC = $3,036 / (55 – 35 + 0) = $152

Employee 2
Age = 45
Service = 10
Net cost at retirement age = $350 x (1 + 4.5%) ^ $^{(65 - 45)}$ = $844
Discount factor = (1 + 5.0%) ^ $^{-(65 - 45)}$ = 0.3769
Survival factor = (1 – 2.0%) ^ $^{(\max[0,\ 55 - 45])}$ = 0.8171
PBO = $844 x 0.3769 x 0.8171 x 15 = $3,899
ABO = $3,899 x 10 / (55 – 45 + 10) = $1,950
SC = $3,899 / (55 – 45 + 10) = $195

3. Continued

Employee 3

Age	= 60
Service	= 15
Net cost at retirement age	= \$350 x (1 + 4.5%) $^{\wedge (65-60)}$ = \$436
Discount factor	= (1 + 5.0%) $^{\wedge -(65-60)}$ = 0.7835
Survival factor	= (1 – 2.0%) $^{\wedge (\max[0, 55-60])}$ = 1.0000
PBO	= \$436 x 0.7835 x 1.0000 x 15 = \$5,124
ABO	= \$5,124 x 1 = \$5,124
SC	= \$0

(d) The Ontario government is considering changing its provincial program to become second payer to private plans. Calculate the impact this change would have to the costs from part (c). Show your work.

Commentary on Question:
Candidates were expected to calculate the impact to the plan sponsor's liability by changing the provincial plan to the 2nd payer. Candidates did very well on this part of the question.

If the provincial program becomes 2nd payer, then ODB plan will only cover costs not paid by the employer plan. This is different from the provincial program being the 1st payer and the employer plan picking up costs not covered under the ODB.
Assuming the employer plan covers all prescription drugs covered by the ODB, the impact on the PBO, ABO and SC would be that the Net cost will now equal the aggregate cost of \$1,000.

Employee 1

PBO	= \$3,036 x \$1,000 / \$350 = \$8,674
ABO	= \$0 x \$1,000 / \$350 = \$0
SC	= \$152 x \$1,000 / \$350 = \$434

Employee 2

PBO	= \$3,899 x \$1,000 / \$350 = \$11,140
ABO	= \$1,950 x \$1,000 / \$350 = \$5,571
SC	= \$195 x \$1,000 / \$350 = \$557

Employee 3

PBO	= \$5,124 x \$1,000 / \$350 = \$14,640
ABO	= \$5,124 x \$1,000 / \$350 = \$14,640
SC	= \$0

Candidates will also get credits if they show the increase in the PBO, ABO, and SC.

3. Continued

(e) XYZ is looking for cost containment strategies to reduce the accrued benefit obligation. They have already considered changing the co-insurance, deductible, dispensing fee or drug formulary and determined these actions would not achieve the desired impact. Recommend three additional changes and describe the impact of each change from both the employer and employee perspective. Justify your recommendations.

Commentary on Question:
Candidates were expected to recommend alternatives other than minor plan design changes that are listed in the question itself. In general, candidates did well on this question.

1. Replacing the drug plan with a health care spending account.
   Employer perspective:
   i. Gives employer complete control of annual claim costs
   ii. Reduces volatility in annual claim costs
   iii. Once fully employer paid, the cost of the plan is tax deductible
   Employee perspective:
   i. May have to go out-of-pocket if total claim not covered by ODB and HSA limit reached.
   ii. Employee may be more proactive in controlling their claims as they manage their HSA limit.
   iii. The benefits are tax free, and unused amounts cannot be paid out as cash.

This option will still result in an ABO, but the costs can be significantly lower as employers have influence on setting the HSA limits. Employers will be better able to manage costs. Because of limited benefits, employees would be forced to reduce "wastage" of benefits and only use when truly needed. This can indirectly contribute to reduce costs to the ODB plan as well as the employer plan.

2. Eliminate or reduce (through aggressive life time caps) retiree benefits for future retirees
   Employer perspective:
   i. Can result in eventual removal of ABO from books.
   ii. Can result in a very unhappy workforce, lower productivity and lawsuits.
   Employee perspective:
   i. May have to go out-of-pocket if total claim not covered by ODB.
   ii. May believe benefits are a vested entitlement and sue employer.
   iii. Will be heavily dependent on ODB and savings for drug expenses.

3. **Continued**

This option can lead to the ultimate desired effect, which is the removal of the obligation from the employer. The benefits can be eliminated through a group purchase from an insurance company for individual policies which would still grant post-retirement benefits to employees, but also remove the obligation from the employer.

3. Move from being 100% employer paid, to a significant employee share of premiums, like 50%.
   Employer perspective:
   i. Will result in immediate reduction in ABO.
   ii. Can result in a very unhappy workforce, lower productivity and lawsuits.
   iii. Will program be mandatory? If not anti-selection possible.
   Employee perspective:
   i. Will have significant out of pocket costs if sharing in the program.
   ii. May believe benefits are a vested entitlement and sue employer.
   iii. May want to opt out of program if healthy.

This option will still result in an ABO, but the costs would be significantly lower dependent on the share of premiums that employees cover. However may not limit "wastage" of benefits as employees use more of what they are actually paying for, which can lead to eventual increase in overall premiums and costs and to offset some of the reductions from the aggressive cost sharing.

The list above is not meant to be an exhaustive list. There are other alternatives including establishing or increasing existing eligibility requirement, requiring retiree cost sharing, etc.

4.

Learning Objectives:

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

Learning Outcomes:

(6b) The candidate will be able to describe the major applicable laws and regulations and evaluate their impact.

Sources:

Canadian Insurance Taxation, 3rd Edition, Borgmann, et. al.

- Chapter 4 Income for tax Purposes – General Rules, pages 29 – 30 (excl. "Imputed Interest Benefit on Real Property") and 34 - 38
- Chapter 6 Reserves, page 74

Commentary on Question:

Solution:

(a) Describe the types of life insurance policy reserves prescribed by regulations.

a) Reserve for life insurance policies
   i. Generally equal to amount reported in insurer's regulatory report
   ii. Cannot exceed insurer's policy liability in respect of a policy
   iii. One-and-a-half preliminary term method or cash surrender value method can be used
b) Reserve for deposit administration fund policies
   i. DA fund policy is a funding instrument used by employers under which premiums placed on deposit are not used to purchase benefits until the beneficiary retires
   ii. Reserve calculated in same manner as life insurance policy
c) Unearned premium reserves for group term policies
   i. Value of reserves on a group term policy that provide coverage for a period of 12 months or less. Max reserve is 100% of unearned premium
d) Reserves for additional benefits or risks
   i. For supplementary benefits, risks and guarantees provided under a life insurance policy, in addition to the normal life risks (e.g., accidental death, disability, substandard, conversion, guaranteed segregated fund)
e) Unpaid claims reserves
   i. Reserve for claims reported but unpaid at year end
   ii. Reserve for claims that arose in year but not yet reported to insurer (IBNR)
f) Experience rating refund reserve
   i. Reserve for dividend, refund of premium/deposit under a group term policy
g) Maximum tax actuarial reserve
   i. The aggregate of maximum amount of life insurance policy reserves, excluding the reserve

4. Continued

(b) As it relates to the calculation of taxable income for a life insurance company:

(i) List the items typically included in income.

(ii) List the items typically deducted from income.

Items typically include in income:

a) Premium income
   i. Net premium written (direct less ceded) and amount received in respect of annuities
b) Repayment of policy loan or interest
c) Reserves
   ii. If tax reserves negative
d) Investment income
e) Imputed interest benefit on real property
f) Foreign accrual property income
g) Income from investment business

Items typically excluded from income:

a) Payments to policyholders
   i. Policy loans
   ii. Claims paid
   iii. Reserve for unpaid claims
   iv. Payments on surrender premium
   v. Policyholder dividends
   vi. Experience rating refunds
   vii. Interest expense
b) Interest paid to non-residents
c) Receivables and bad debts
d) Policy acquisition expenses
e) Prepaid expenses
f) Rental loss
g) Foreign taxes paid on income from a foreign insurance business
h) Investment tax
i) Reserves

(c) Describe steps to compute investment income tax for a Canadian life insurance company and calculate the 2012 investment income tax for GoBig. Show your work.

4. Continued

Taxable life investment income or loss for a year can be calculated as:

1. Insurer's life investment income
   a. Only reserves for DA fund policies, life insurance policies, and special benefits
   b. Using prescribed yield and insurer's average maximum tax actuarial reserve for the year
2. (plus) experience rating refund reserve adjustment
3. (less) amounts reported to policyholders
4. If the above result is positive, then deduct Canadian investment loss carried forward from previous 20 years (if any).
5. Then, if result of the above is positive, apply a 15% tax. This is equal to the investment income tax

If the result is negative, amount may be carried forward

The calculate investment income tax is:

Step 1 and 2: $15,340,000 + $1,720,000 = $17,060,000

Step 3: $17,060,000 - $114,000 = $16,946,000

Step 4: $16,946,000 - $4,425,000 = $12,521,000

Step 5: $12,521,000 x 15% = $1,878,150

5. Learning Objectives:

7. Understand and evaluate Retiree Group and Life Benefits in Canada.

Learning Outcomes:

(7c) Determine employer liabilities for retiree benefits under various accounting standards.

Sources:

GHC-634-13: Towers Watson Comparison of IAS 19 (2008) to FASB ASC 715

GHC-635-13: Towers Watson Comparison of IAS 19 (2008) to IAS 19 (2011)

GHC-636-13: Deloitte Summaries on IAS 19

Commentary on Question:

Commentary listed underneath each question component.

Solution:

(a) Describe the basic principle of IAS 19 and list five types of employee benefits where IAS 19 applies.

Commentary on Question:

This question tested the candidate's ability to recall from the Deloitte IAS 19 reading. Most candidates were able to describe the basic principle of IAS 19 as well as list three employee benefits where IAS 19 applies. Only a few candidates were able to list at least five.

The basic principle of IAS 19 is to recognize the cost of benefits in the period in which they are earned not when they are paid.

The following list represents all employee benefits that could have been included in a correct response. Only five were needed for full marks.

- Compensated absences (paid vacations and sick leave), Post employment life and medical benefits, Pension benefits, Deferred compensation, Free or subsidized goods or services given to employees, wages and salaries, profit sharing plans, bonuses, medical and life insurance benefits during employment, housing benefits, long-service or sabbatical leave, jubilee benefits, termination benefits.

5. Continued

(b) Compare FAS 106, IAS 19 (2008) and IAS 19 (2011) standards with respect to accounting for postretirement benefits in the following areas:

(i) Costs recognized in profit and loss

(ii) Gain/Loss recognition

(iii) Past service cost recognition

Commentary on Question:
Part (b) tested the candidate's ability to recall from a particular reading and to demonstrate their understanding of the various accounting standards with respect to the post-employment and post-retirement benefits. Full marks were achieved by providing a comparison between the accounting standards for each section as well as briefly summarizing the differences. The majority of candidates did not receive full marks, but most received partial marks.

Cost recognized in Profit and Loss

- FAS 106 – includes service cost, interest cost, expected return on assets, net loss or gain recognized, prior service cost recognized, curtailment and settlement effects.
- IAS 19 (2008) – same as FAS 106 except gains and losses can be recognized through other comprehensive income if company elects to immediately recognize for all plans.
- IAS 19 (2011) – includes service cost, interest on liability/asset (i.e. same as FAS 106 and IAS 19 (2008), with differences in recognition of unrecognized prior service cost. Plan changes are recognized immediately in P&L.
- Conclusion: FAS 106 and IAS 19 (2008) are quite similar in the components recognized in profit and loss except in cases where a company chooses to use OCI to fully recognize gains and losses but under IAS 19 (2011) the profit and loss is simplified and only includes service cost, interest cost and past service cost components previously included.

Gain/Loss recognition

- FAS 106 – immediate or delayed recognition but must amortize a minimum amount falling outside the 10% corridor (defined as the greater of the PBO or market value of assets) over the average remaining service period of active employees. Costs not yet recognized are reported in Accumulated OCI.
- IAS 19 (2008) – immediate or delayed recognition but must amortize minimum similar to FAS 106 if delayed approach taken. If immediate recognition is selected an employer can do this through profit and loss or other comprehensive income.

5. **Continued**

- IAS 19 (2011) immediate recognition through Other Comprehensive Income without impacting profit and loss.
- Conclusion: IAS 19 (2008) is acting almost as a transition from the FAS 106 approach giving the option of this method and the method that becomes required under IAS 19 (2011).

Past Service Cost

- FAS 106 – Amortize amount over active participants' average remaining service period to full eligibility date or period benefitted, with portion not yet recognized in Accumulated OCI.
- IAS 19 (2008) – Immediately recognize portion for vested members and amortize non-vested benefits over average remaining service to vesting date.
- IAS 19 (2011) – Immediately recognized at the time of the amendment and included in service cost (and P&L).
- Conclusion: Each option is quite different, FAS 106 is the slowest to recognize changes due to full amortization while IAS 19 (2011) requires full immediate recognition. IAS 19 (2008) is again somewhat of a hybrid in that vested portions are immediately recognized while non-vested are amortized.

6. Learning Objectives:

5. Prepare and interpret insurance company financial statements in accordance with IFRS & IAS.

Learning Outcomes:

(5a) Interpret insurer financial statements from the viewpoint of various stakeholders.

(5b) Evaluate a key financial performance measures used by L&H insurers for both short and long-term products.

(5c) Project financial outcomes and recommend strategy to senior management to achieve financial goals.

(5e) Compare key differences and similarities in measures by accounting basis.

Sources:

Bluhm, Chapter 4
Higgins, Chapter 21
Higgins, Chapter 45

Commentary on Question:

Question tested candidate's ability to (a) identify the differences between STAT & GAAP for both USA/Canada, (b) calculate and interpret key financial measures of a life/health insurer, (c) understand the dynamics between these financial measures, and (d) probe into the business operations using these financial measures

Solution:

(a) Briefly describe GAAP reporting in the U.S. and Canada.

Commentary on Question:
The candidates skipped most of this section

GAAP reporting is a framework for consistently comparing financial results of different business entities.

- It assumes a going-concern basis
- It focuses on the income statement
- It attempts to match the timing of revenues and expenses during a period, and thus, better accuracy of reported earnings.

US

- For L&H insurers, the standards follow FAS 60 and FAS 97
- Both publicly traded and mutual insurers are required to use GAAP statements

6. Continued

Canada

- GAAP = Stat accounting; insurers are not allowed to report on different bases
- For reserves, reporting is done using IFRS and Canadian GAAP
- OSFI financial reports are required quarterly and annually
- The actuary submits to the OSFI a report that contains the following:
  - The assumptions: description, justification, any changes made to the assumptions
  - The use of approximations
  - Statement of compliance with the CIA standards of practice, and that the actuary has performed his/her duties
  - The manner of actuarial compensation
  - The signed actuarial opinion
- The carrier must report minimum regulatory capital requirements
- The carrier must also demonstrate dynamic capital adequacy testing

(b) Describe how statutory reporting differs from GAAP in the U.S. and Canada.

Commentary on Question:
Hardly anybody commented on Canadian GAAP/Stat.
Very few identified that the focus on stat was the balance sheet, and that GAAP was the income statement.

US Stat vs. GAAP

- US Stat requires filing in the NAIC statement
- Stat emphasizes solvency (hence more conservative valuation of assets and liabilities) and the balance sheet
- GAAP emphasis the income statement
- Where Stat differs from GAAP:
  - Stat has more conservative reserving assumptions.
    ** Stat sets limits on interest rates, mortality and morbidity
    ** GAAP has provisions for adverse deviation and allows lapses
  - Stat sets the method for asset values and what counts as admitted assets; GAAP uses market values
  - Stat doesn't allow DAC
  - Stat only partially recognizes deferred taxes
  - Stat requires AVR and IMR, which serve as cushions

Canada: Stat = GAAP

(c) Compare the sustainable and actual growth rates for each of 2011, 2012 and 2013F, including an explanation of each component of sustainable growth and its impact on overall growth during the 3-year period. Show your work.

6. **Continued**

Commentary on Question:
Most candidates identified the key components (profit margin, retention, asset turnover, financial leverage). Only a few knew the translation between other financial measure (ROE, ROA), and identified the correct points in time.

Majority confused sustainable growth with (revenue) growth.

Very few candidates commented on the interaction of the components of sustainable growth with overall (revenue) growth.

P = profit margin = net income / revenue (or premium)
R = retention ratio = (1 - dividend %); assume 100%
A = asset turnover = revenue (or premium) / assets EOY
T = leverage = assets EOY / equity BOY

boy = beginning of the year
eoy = end of the year

OR, you can use ROE (boy) x retention
OR, you can use ROA (boy) x leverage x retention
OR, you can show ratio of retained earnings between 2 years

Calculate for each year 2011, 2012 and 2013, respectively, the sustainable growth, using the PRAT formula (show the numerator and denominator)

- Profit margin: 11.5% (=115K/1000K), 6.3% (=75K/1200K), 5.7% (=85K/1500K)
- Retention: 100% both yrs
- Asset turnover: 0.62 (=1000K/1615K), 0.46 (=1200K/2590K), 0.43 (=1500/3475).
- Leverage: 2.02(=1615K/800K), 2.83 (=2590K/915K), 3.51 (=3475K/990K)
- Sustainable growth (product): 14.4%, 8.2%, 8.6%
- Actual growth (change in revenue or premium): 20% (=1200K/1000K), 25% (=1500K/1200K)

Therefore, actual growth > sustainable growth

At a minimum state that that over the 3-year period:

- Profit margin decreased significantly
- Asset turnover decreased (growth in premium is slower than asset growth)
- Leverage increased, but there's a limit to the amount of debt that a company can bear

6. **Continued**

(d) Describe strategies for Frere Jacques to address differences between sustainable and actual growth.

Commentary on Question:
This was a "list" question, and should agree with the response in previous sub-question. Candidates who were not able to arrive at a conclusion in (c) hedged their bet and responded both ways (sustainable > actual growth, and sustainable < actual growth).

Because actual growth > sustainable growth, the recommended strategies to slow down the actual growth include:

- Sell new equity (sell shares)....this is difficult for companies to do
- Increase financial leverage (borrow)....there's a limit to debt financing
- Lower dividends (currently 0%)
- Prune (sell) marginal activities (this lower sales)
- Outsource (higher asset turnover)
- Raise prices (premiums) to improve profit margins
- Merge with cash cow

(e) Critique the forecast provided by the company in light of the results of the last three years and prepare a list of questions for management to justify the forecast.

Commentary on Question:
Very few showed calculations in 2014 and 2015. Other than profit margins and claim reserves, majority did not comment on the patterns of the key financial measures (asset turnover, leverage; or the translated equivalents of ROA/ROE). Most interchanged sustainable and actual growth measures.

Many took ratios (loss ratios, expense ratios, tax ratios), and based their comments on these.

Calculate for each year 2014 and 2015, the PRAT (using the same basis as part c; show the numerator and denominator)

- Profit margin: 4.5% (=90K/2000K), 3.7% (=100K/2700K)
- Retention: 100% both yrs
- Asset turnover: 0.42 (=2000K/4765K), 0.40 (=2700K/6765K)
- Leverage: 4.4 (=4765K/1075K), 5.8 (=6765K/1165K)
- Sustainable growth (product): 8.4%, 8.6%
- Actual growth: 33% (=2000K/1500K), 35% (=2700K/2000K)

6. **Continued**

Patterns

- Sustainable growth rates are similar/consistent in actual % as past 2 yrs (but are lower than actual growth)
- Actual growth rates are higher than past 2 yrs
- Profit margins continue to decrease
- Financial leverage (debt) continues to increase

Questions to ask

- Why is growth expected to increase/accelerate?
- How does one close the gap between actual and sustainable growth?
- Why does the profit margin continue to decrease?
- Why are claims and reserves both increasing? What assumptions were used?

(f) Describe techniques available to cope with the uncertainty inherent in the forecast.

Commentary on Question:
The candidates listed their responses, along with a brief description. Few described simulation.

- Sensitivity analysis: change 1 assumption at a time to see the impact on results
- Scenario analysis: identify scenarios (clusters of related changes to assumptions), and see the impact on results
- Simulation: for each variable, define a probability distribution. Generate forecasts for a simultaneous change of selected variables.
    - This uses computer models

7. Learning Objectives:

Prepare and interpret insurance company financial statements in accordance with IFRS and IAS

Learning Outcomes:

Explain fair value accounting principles and describe IAS

Sources:

Educational Note: Classification of Contracts under International Financial Reporting Standards

IFRS 4

Conversion to International Financial Reporting Standards by Federally Regulated Entities

Solution:

(a) Outline the general process for classifying contracts and contract components under the International Accounting Standards Board accounting guidance.

a) Obtain relevant information.
b) Definition of a contract for accounting purposes — Consider whether to separate or combine contracts for accounting purposes.
c) Classification of stand-alone service contracts — Consider whether the contract creates financial assets or liabilities for the reporting entity in which case it may be a financial instrument, rather than solely requiring the entity to provide services for a fee.
d) Classification as an insurance contract — Determine if the contract contains significant INSURANCE RISK. If yes, then the contract is an insurance contract and IFRS 4 applies.
e) Classification as an investment contract —If it is not insurance, determine if the contract is a financial instrument (e.g., it creates FINANCIAL LIABILITIES, equity instruments, or financial assets). If yes, then the contract is an investment contract. If no, the contract is a service contract and IAS 18 applies.
f) DPFs —If the contract is an investment contract, determine if the contract contains a DPF. If yes, then IFRS 4 and IAS 32 are applicable. If no, then IAS 32 and IAS 39 apply.
g) SERVICE COMPONENT— If IAS 39 is applicable, determine if the contract contains a service component. If yes, then acquisition and other servicing expenses related to the service component and related earnings are accounted for under IAS 18. The rest of the contract is accounted for under IAS 39.

7. Continued

h) Embedded derivatives —For insurance contracts, investment contracts, and service contracts, determine if the contract contains an embedded derivative. If an embedded derivative is included, determine if that component is already measured at FAIR VALUE or if it is closely related to the host contract. If neither of these conditions is satisfied, separation might be required. In case of an embedded derivative special disclosure might be required under IFRS 4.

i) UNBUNDLING of a contract into components — For insurance contracts, determine if unbundling of a DEPOSIT COMPONENT is required or permitted by the accounting guidance. If unbundled into deposit and INSURANCE COMPONENTS, the deposit component is accounted for under IAS 39 and the insurance component is accounted for under IFRS 4.

(b)

(i) Outline the IFRS 4 requirements for an insurance contract; and

(ii) Indicate if contracts with policyholders W, X and Y fall within the scope of IFRS 4. Justify your answer.

(i) The contract must involve the transfer of significant insurance risk to be considered an insurance contract.

Furthermore, an insurance contract is a contract under which one party (the insurer) accepts significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder.

(ii) Contract with W – classified as an insurance contract as the insurer accepts the life insurance risk from policyholder W. In addition, the insurer agrees to compensate the beneficiary in the event of a person’s death.

Contract with X – not classified as an insurance contract as the risk stays with the policyholder.

Contract with Y – classified as an insurance contract as the insurer accepts the life insurance risk from policyholder W for a premium. In addition, the insurer agrees to compensate the beneficiary in the event of a person’s death.

7. Continued

(c) On January 10, 2012, it was determined that the liability for the contract with Policyholder Y at December 31, 2011 was inadequate based on additional cash flow testing and changes in market conditions. Explain the accounting treatment that should be applied.

The correct accounting treatment is to recognize the entire gain or loss as at December 31, 2011.

The liability of $12,000 (on a non-discounted basis) is a better estimate of the liability and that $2,000 (i.e. difference between $12,000 and $10,000 on held at December 31, 2011) should be recognized in profit and loss (as a loss).

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 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:

Sources:
Group Insurance, Bluhm, 6th Edition
- Chapter 9 Prescription Drug Benefits in the US
- Chapter 33 Estimating Medical Claims Costs

Commentary on Question:
Commentary listed underneath question component.

Solution:
(a) Explain how PBMs add value.

Commentary on Question:
Most candidates did well on listing the ways that PBMs can provide values. Credit was given for a variety of responses if the candidate explained how various items added value rather than just listing functions that PBMs perform.

PBMs provide value by:
- Negotiating contracts and developing pharmacy networks
- Negotiating better AWP discounts
- Giving advice on formulary design
- Providing MAC lists for generics

(b) Identify the main drivers of growth in pharmacy costs.

Commentary on Question:
Candidates performed well on this section in identifying drivers of the increase in Rx costs.

8. Continued

The growth in Rx costs has been driven by:

- New drug pipeline: Drugs continue to be developed at a rapid pace and are pharmaceutical companies are eager to recoup the Research & Development costs
- Biologics: Very expensive specialty/ injectable drugs
- Patents: These protect brand name drugs and can preventer cheaper, generic alternatives from being able to enter the market.
- Direct-to-consumer advertising increase the public's awareness and knowledge of drugs available
- Manufacturing cost-sharing offsets in the form of rebates make it easier for consumers to purchase pharmaceutical drugs
- Faster approval process by the FDA
- Aging population

(c) Explain reasons why pharmacy cost growth has slowed in recent years.

Commentary on Question:
Many candidates were able to identify reasons that Rx cost increase has started to slow. Others seemed to contradict what they had listed in part b, or listed their personal/general ideas and theories.

Rx cost increase has slowed in recent years because of:

- Wave of patent expirations: Additional generics have been able to come on the market as patents have expired on brand drugs
- Economy: Economic recession has led to decreased spending in several areas, including pharmaceuticals
- Lower overall spending in important therapeutic classes, such as Lipitor, and increased use of generics

(d) Recommend strategies, other than increasing co-payments or switching to coinsurance, your company could use to control increasing pharmacy benefit costs.

Commentary on Question:
Candidates recommended a variety of plan design, utilization control, and negotiation strategies to control Rx costs. We have included a sample of these actions in the model solution, but credit was given to other proposals as long as the candidate explained how this would mitigate cost increase.

8. Continued

Possible actions that could help control Rx cost increase are:

- Formularies
- Tiered benefit designs
- Value-based plan designs
- Limits on usage, which could include step therapy, and other utilization control mechanisms

(e) Construct a table with the projected unit cost and utilization levels for each of brand and generic drugs in 2013 and 2014. Show your work.

Commentary on Question:
Most candidates did well on the calculations in this section. This part of the question asked candidates to create a table (or two tables). Candidates who included the relevant formulas and numbers but did not create a table did not earn full credit. Some candidates missed the inclusion of the dispensing fee when calculating unit cost, earning only partial credit.

UNIT COST	2013	2014
Brand	$80*0.85+$1 = $69.00	$80*0.85*1.11 +$1 = $76.48
Generic	$10*0.50+$1.50 = $6.50	$10*0.50*1.02+$1.50 = $6.60

UTILIZATION	2013	2014
Brand	25.0*26% = 6.5	27.0*25% = 6.75
Generic	25.0*74% = 18.5	27.0*75% = 20.25

(f) Calculate the overall PMPM trend for 2014 with the existing PBM. Show your work.

Commentary on Question:
This section relied on the information calculated in the prior section. For those who correctly computed the numbers in part e, full credit was often earned here. For candidates who made a mistake in part e but still correctly applied the PMPM and trend formulas in this section, credit was still given as long as work was shown. Candidates who did not divide by 12 to get a PMPM did not receive full credit since the question specifically asked for the PMPMs.

The first step is to calculate the PMPM in 2013 and 2014 based on the information in the table above.

8. Continued

PMPM = (Unit Cost * Annual Utilization) / 12

2013 PMPM = ($69.00*6.5+$6.50*18.5) / 12 = $47.40

2014 PMPM = ($76.48*6.75+$6.60*20.25) / 12 = $54.16

Trend = $54.16 / $47.40 – 1 = 14.3%

(g) Evaluate whether switching PBMs would generate savings. Show your work and explain your conclusion.

Commentary on Question:
This section asked candidates to evaluate if switching PBMs would generate savings. Some candidates computed the new cost but did not assess how this compared to the PMPM calculated in part f. To receive full credit, candidates needed to show their new calculations and explain that this PBM would cost more than the current PBM. Full credit was given to candidates who identified that the reason for this was the decreased brand discount and the heavy weighting given to brand drugs.

First, calculate revised unit cost for 2014 under the new PBM:

UNIT COST	2014
Brand	$80*0.90*1.11 +$1+$1 = $81.92
Generic	$10*0.35*1.02+$1.50+$1 = $6.07

Revised 2014 PMPM = ($81.92*6.75 + $6.07*20.25) / 12 = $56.32

You should not switch PBMs because it results in a higher PMPM and switching will not generate savings.

Although the new PBM has deeper generic discounts, the brand discount is worse. Brand drugs have a much higher unit cost so, in total, they make up a greater portion of the overall PMPM which makes the overall cost with the new PBM not as good as with the current PBM.

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

Learning Outcomes:

Sources:
Group Insurance, Bluhm, 6th Edition

- Chapter 4 Group Life Insurance

Commentary on Question:
Question tested basic understanding of plan provisions and tax considerations, both written calculations.

Solution:
(a) For group basic and group supplemental term life:

(i) Outline provisions common to both

Eligibility

- Full-time working minimum number of hours
- Actively at work
- Waiting period from hire date

Continuity of coverage

- Ability for insured to covert the group term insurance coverage to an individual life insurance policy upon termination of employment

Disability

- Waiver of premium for disability
- Total and permanent disability
- Extended death benefit

Benefit payment provisions

- Accelerated benefits
- Beneficiary
- Minimum participation

9. Continued

(ii) Compare the tax treatment applicable to Lovestar and its employees

First $50k of ER paid group term coverage is tax free
Amounts above $50k results in imputed income for EE
Premiums paid by employer are generally deductible on employers income tax return
Death benefits payable are excludable from a beneficiary's gross income

Group supplemental

- Generally EE pay all avoiding imputed income (if premium step rates are all at or below the Table I premium step rates or all at or above Table I premium step rates)
- Advantageous for basic and supplemental group life to be treated as separate plans

(b) Calculate the basic life renewal premium charged to Lovestar, assuming an administration and profit load equal to 20% of premium and a January 1 renewal date. Show your work.

Industry Adj applied at member level

Name	Salary		1,000		12		Manual Claims Rate		Industry Adj		Central Date Adj		Annual Claims	Name	Monthly Claims
Marie	$60,000	/	1,000	x	12	x	$0.05	x	1.05	x	1.00	=	$37.80	Marie	$3.15
Joel	$42,000	/	1,000	x	12	x	$0.12	x	1.05	x	1.00	=	$63.50	Joel	$5.29
Elise	$125,000	/	1,000	x	12	x	$0.15	x	1.05	x	1.00	=	$236.25	Elise	$19.69
Jenny	$70,000	/	1,000	x	12	x	$0.08	x	1.05	x	1.00	=	$70.56	Jenny	$5.88
Mike	$31,000	/	1,000	x	12	x	$0.64	x	1.05	x	1.00	=	$249.98	Mike	$20.83
													$658.09	Total Claims	$54.84
													20%	Retention/Load	
													$822.61	**Total Premium**	**$68.55**
													$0.2090	Monthly premium per $1,000 covered	

(c) Compare the annual imputed income for Marie and Joel. Show your work.

Marie = $0.06 x ($60 - $50) x 12 = $7.20 annual imputed income
Joel = no imputed income, coverage less than $50K

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

Learning Outcomes:

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

(1e) Describe various markets for these products.

Sources:

Group Insurance, Bluhm, 6th Edition

- Chapter 5 Group Disability Benefits
- Chapter 10 Group Long Term Care Insurance

Commentary on Question:

In general, candidates performed better on sections (b) and (c) than on section (a).

Solution:

(a) Compare the U.S. group LTC market to the U.S. individual and Canadian LTC markets.

Commentary on Question:

In general, candidates had trouble with this section because they compared plan benefit differences rather than describing the various markets themselves.

- Market for LTC insurance in the U.S. is much more developed than the Canadian market because Canadian Medicare covers some long term care expenses
- The group LTC market in the U.S. is much smaller than the individual LTC market
- However, the group LTC insurance market has been growing at a rapid pace

(b) Describe plan provisions common to both LTC and LTD.

Commentary on Question:

This section is specifically asking for only plan provisions which are common between both coverages. Thus, candidates who supplied two separate lists with no commentary on the connection between the two, or candidates who listed plan provisions which are not common between the two coverages did not score as well as those who listed only common provisions.

10. **Continued**

- Both LTD and LTC have benefit triggers
    i. LTD: inability to perform material and substantial occupation duties
    ii. LTC: inability to perform ADLs
- Both have elimination periods
    i. Typical LTD elimination period is 3 or 6 months
    ii. Typical LTC is usually expressed in days and varies from zero to 365 days. The most common waiting periods are 30, 60, 90, and 100 days.
- Both have optional inflation protection
- Both have spousal benefits
- Both have death benefits
- Both have exclusions/limitations

(c) Critique the position of the executive team.

Commentary on Question:
In general, candidates performed well in this section.

- While LTC and LTD may have some similar plan provisions, they insure against very different events.
- Long term care insurance prefunds future expenses for skilled or custodial care and services—which may be due to accident or illness, but is commonly just from aging—when they cannot perform basic activities of daily living (ADLs).
- Disability insurance replaces lost income during working years (pre-65) when the member has had a serious accident or sickness.
- The LTC coverage to be offered will be voluntary, so other than administrative burden, there won't be any cost to Loony Lakes.

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:

Sources:
GHC-102-13: Loss Ratios and Health Coverages, American Academy of Actuaries' Loss ratio Work Group

GHC-103-13: The Challenges of Pricing Health Insurance for the 2013 Exchanges

Commentary on Question:
This question was testing the candidate's understanding of the pricing of health insurance due to ACA, as well as how the newly promulgated Minimum Loss Ratio standards are used by different entities.

Solution:

(a) Summarize the changes created by the ACA and the associated pricing challenges in these markets.

Commentary on Question:
Many candidates did well on listing the changes created by ACA but did not note challenges, or when challenges were noted they were they were not challenges but instead descriptions of the rule or a reference that they were challenging.

Change #1: Expands private insurance coverage by
- Requiring guaranteed issue
- Mandating coverage
- Making premium subsidies available to lower-income people

Pricing Challenges: Predicting who will enter the exchange for various reasons: flux of previously uninsured, young/healthy may elect to pay the penalty, % of employers electing to stop providing coverage, etc.

Change #2: Requires new benefit designs to be offered
- Including four "metal levels" corresponding to different levels of actuarial value for a benchmark package of essential health benefits

Pricing Challenges: Benchmark plans are left to the states so there is uncertainty as to what the benefits will be; the potential for "rate shock" as the benefits will be richer for many as a result.

Change #3: Eliminates premium differentials by health status and gender and restricts age variation to a 3-to-1 ratio.
Pricing Challenges: Adverse selection may result when younger people see rates go up and older find coverage more affordable; Rules vary by state so selection effects are complicated.

11. Continued

Change #4: Contains three risk mitigation strategies

- Temporary reinsurance
- Risk corridors
- Risk adjustment program

Pricing Challenges: Full design parameters of these programs are unknown; limited data for actuaries to use to model expected impact.

Change #5: Adherance to Minimum Loss Ratio

- >80% SG and Individual

Pricing Challenges: Maintain admin and profitability while maintaining MLR. Additional administrative costs related to tracking MLR and paying rebates as necessary.

(b) Describe ways company management uses medical loss ratio information.

Measuring the financial performance of products

- By subgroup – individual vs. group, etc.
- Used to manage care provider groups

Preparing business plans that project earnings

- Can be used for applications for license for a new company or expansion to operate in a new jurisdiction
- Support filings for new or renewal rates and policy forms

Reporting information concerning results to policyholders such as employer groups

- Used by them for budgeting purposes, monitoring experience, and/or understanding rate increases

Setting incentive target earnings for management, employee, and provider compensation

- Agents and brokers may be compensated based on loss ratios
- Loss ratios may trigger payments to providers subject to profit sharing arrangements

(c) Describe considerations Derby*Health* should take into account when performing the loss ratio comparison.

- Plans/products, geographical footprint, and benefit designs
- Financial arrangements such as non-refunding and refunding as their loss ratios can present very different results
- How expenses are treated; for example, managed care organizations and commercial insurer treatment of medical care expenses as claims
- The effect of combining/pooling ‘cells’ in order to achieve credibility
- Reinsurance transactions

11. Continued

- The presence of conservatism in pricing and IBNR, particularly for new business or markets

(d) List ways regulators might use this information.

- Prospective rate reviews - determining if premiums are reasonable in relation to claims
- Retrospective rate reviews – e.g. refund calculations
- As an indicator of the insurer profitability
- As an indicator of insurer solvency

(e) Canetuckee's commissioner has questioned the proposed rate increases. Justify the 2014 rate increase for each line of business.

Commentary on Question:
Many candidates did well on this question. A relatively common oversight was not noting the lack of credibility for the small group line of business.

Individual

- The 9% increase is equal to the projected medical trend and expected to maintain an 80% loss ratio.
- Since this is at the ACA minimum, it's considered reasonable in relation to the benefits provided.

Small Group

- With 100 members, the block is not credible.
- MLR is higher than the ACA standard, but this may be due to a large claimant (or duration of existing membership, etc.)

12. **Learning Objectives:**

3. The candidate will understand how to recommend an employee benefit strategy.

Learning Outcomes:

Sources:

The Handbook of Employee Benefits, 7th Edition, Rosenbloom

- Chapter 24 Strategic Benefit Plan Management
- Chapter 25 Cafeteria Plan Design and Management, pages 671 - 699

Commentary on Question:

In the first part of the question, candidates were required to identify errors, applying knowledge of the rules surrounding cafeteria plans. In the second and third portions, the candidate was asked to "describe" considerations, requiring them to supply some demonstration of understanding rather than simply listing them from memory.

Solution:

(a) Identify and explain the conflicts and errors in Wally's email.

Commentary on Question:

This portion of the question required the highest level of thinking skills, and the scores reflected it. Responses clearly showed that candidates understood what was being asked, but the majority failed to score most of the available points for this section.

Errors and inconsistencies:

- LTC cannot be offered in a cafeteria plan
- Employees must be able to choose cash or a benefit
- Life insurance above $50,000 is taxable to employee
- Identity theft protection on FSA debit card is not optional
- FSA only for qualified medical expenses, not for paying medical premiums
- Welfare benefits (medical, etc.) still subject to ERISA, even though the cafeteria plan itself is not

(b) List the disadvantages of offering a cafeteria plan from an employer's perspective.

Commentary on Question:

Scores were fairly high on this portion of the test. Then again, it was the simplest to answer as it required little more than the regurgitation of a list.

Disadvantages to an employer:

- Costly to set up and administer
- More adverse selection likely
- For an FSA, the funds must be available any time during the year
- Must test for non-discrimination of benefits to get tax-free status

12. Continued

(c) Wally's brother, a part owner, questions your company's ability to administer benefits properly. Describe competencies in which a benefits director must be proficient.

Commentary on Question:
The vast majority of candidates successfully provided approximately half of the entries from the required list (9 items). However, approximately half of the candidates failed to provide relevant supporting details for more than two or three of these items.

Competencies:

- Benefits plan design – Help employers choose those that meet their objectives
- Communication – New employee orientation, special circumstances, etc
- Technology – Employee self-service site, etc
- Regulations – must stay up to date, including tax codes
- Reports to management, including measuring of achievement of HR objectives
- Monitor the external environment – including competitor trends, new technology

13. **Learning Objectives:**

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

Learning Outcomes:

Sources:
GHC-101-13: Group Disability Insurance (Sections 4 & 7)

Commentary on Question:
Commentary listed underneath question component.

Solution:
(a) Describe sources of data your firm could use to develop independent premium rates.

Commentary on Question:
Most candidates listed general sources of data instead of describing sources specific to LTD pricing.

Sources of data your firm could use to develop independent premium rates include:

Insurer studies
- Use company's own LTD claims experience to conduct loss ratio studies and actual-to-expected incidence and termination rate studies

TSA Reports – 1984 Reports
- Containing annual claim incidence rates per 1,000 by age group, gender and elimination period and ratios of actual to tabular incidence rates

SOA 2000 Basic Experience Table
- Intercompany studies performed by the SOA Disability Experience committee

1987 Commissioners Group Disability Table
- Includes rates that vary by gender and elimination period

(b) Identify plan design features for which you would adjust the manual rates.

Commentary on Question:
Most candidates did well on this part of the question and identified enough plan features to receive full credit. Rating factors, instead of plan features, received no credit (e.g. geography, age, gender, etc.)

13. Continued

Plan design features for which you would adjust the manual rates could include:

- Benefit Percentage
- Maximum Benefit
- Minimum Benefit
- Elimination Period
- Benefit Period
- Definition of Disability
- Offsets from various sources
- Limits on Mental Health and Drug and Alcoholism
- Optional Features (pension, survivor, COLA)
- Underwriting Variations

(c) Calculate the monthly premium for $5,000 of monthly benefit based on the above information. Show your work.

Commentary on Question:
Some candidates calculated an annual premium instead of monthly. To receive full credit, the calculation of a monthly premium needed to be shown.

Given information:

- Reserve at time 0 is $50
- Incidence rate is 0.004

Monthly Premium
= \$5,000 * Base Rate$_{35,\ m,\ 90,\ 65}$ / 12
= \$5,000 * I$_{35,m,90}$ * Reserve$_{35,\ m,\ 90,\ 0}$ / 12
= \$5,000 * 0.0040 * \$50 / 12
= \$83.33