COURSE 2B LIFE INSURANCE SEMESTER 2 2013 EXAMINATIONS

QUESTION 1 (30 MARKS)

Globex Corporation Ltd. ("Globex") was founded five years ago and was incorporated with $150m of ordinary share capital and $50m of preference share capital. No additional capital has been raised since this initial capital raising.

Globex has one statutory fund which writes lump sum business in Australia written through mortgage brokers who receive both up-front and renewal commission for writing insurance policies issued by Globex. The rates for the policies are reviewed every 3 years. You have recently taken the role of Globex's Appointed Actuary.

The balance sheet for both the Globex Statutory Fund as well as the Shareholder's Fund is shown in Appendix A (note also the accompanying notes which provide further detail for the items included in the balance sheet provided at the end of this question):

a) **Using the information provided in Appendices A and B, calculate the Capital Base of Globex, as defined under LPS110, at 30 June 2013 for each of the following:**

   i) the Statutory Fund;
   ii) the Shareholders Fund (also known as the General Fund); and
   iii) the company as a whole

(4 Marks)

b) **You are now considering the calculation of the Prudential Capital Requirement (PCR) for Globex's statutory fund. In particular, you are considering the risk margins to be used for the calculation of the insurance risk charge under LPS115.**

   For each of the risk margins covered in LPS115 discuss how you would approach the job of setting these margins for Globex's business. Include in your answer where you are likely to source any information. (8 Marks)

c) **Your actuarial analyst has provided the information in the attached spreadsheet relating to Globex's business. This information covers**

   - **Cashflows of premium, commissions and incurred claims; and**
   - **Sum Insured projection for the next 20 years.**

   Subsequently, you and the Board have agreed to apply the following margins to these cashflows for the purposes of calculating the Insurance Risk Charge under LPS115.

LPS115 Margin	**Stress Margin %**
Random Stress Margin	40% increase
Event Stress Margin	per LPS115
Future Stress Margin	25% increase

Based on this information, calculate the Risk Free Best Estimate Liability (RFBEL), Random Stress, Future Stress and Event Stress margins. Assume a risk free rate of 4% per annum. Explain any assumptions you make in your calculations. You may submit the spreadsheet for your answer but you must clearly label each item of your answer. Note that your calculation of RFBEL will not necessarily match the value shown in Appendix B. (6 Marks)

d) It is now one year later and Globex is looking to move into the Australian group insurance market. In particular, Globex is looking at an opportunity to take on a large block (approximately $100m of annual premium for a 5 year rate guarantee) of industry fund business which contains both lump sum (death and TPD) and Group Salary Continuance (GSC) business. Globex plans to heavily reinsure this business (with the same reinsurer as it has used for its existing business).

In putting together your capital estimates for this transaction, you notice that under LPS117, Globex has an asset concentration risk charge for its exposure to its reinsurance partner. Globex is keen to retain this partner for all of its business due to the competitive terms the reinsurer is able to offer. Draft a memo to the CFO describing

- the alternative ways Globex may reduce or eliminate the asset concentration risk charge
- the advantages and disadvantages of each approach
- your preferred approach and why you have made this choice
- how your preferred approach would impact target capital

(12 Marks)

Attachments

1. C2B_LAQ1_Data.xlsx

Appendices

A. Globex Corporation Ltd – Balance Sheet at 30 June 2013

B. Additional Information

APPENDIX A: Globex Corporation Ltd – Balance Sheet at 30 June 2013

Globex Corporation Ltd: Balance Sheet at 30 June 2013	Statutory Fund ($000s)	Shareholders Fund ($000s)	Company as a whole ($000s)	Notes
ASSETS				
Cash	25,000	8,000	33,000	
Investments	140,000	80,000	220,000	(A)
Premiums Receivable	35,000	0	35,000	
Deferred Tax Assets	5,000	0	5,000	
Ceded Policy Liability	30,000	0	30,000	(B)
Total Assets	**235,000**	**88,000**	**323,000**	
LIABILITIES				
Claims Outstanding	15,000	0	15,000	(C)
Commissions Payable	10,000	0	10,000	
Policy Liability	60,000	0	60,000	
Total Liabilities	**85,000**	**0**	**85,000**	
CAPITAL				
Transfers from Shareholders Fund	120,000	-120,000	0	
Transfers to Shareholders Fund	-50,000	50,000	0	
Retained Earnings	80,000	8,000	88,000	
Shareholder Dividends	n/a	-50,000	-50,000	(D)
Ordinary Share Capital	n/a	150,000	150,000	
Preference Share Capital	n/a	50,000	50,000	(E)
Subordinated Debt	n/a	0	0	
Total Capital	**150,000**	**88,000**	**238,000**	

A. All investments are held in Australian Commonwealth Government Bonds

B. A 50% quota share is in place where the reinsurer proportionately shares in 50% of the commissions payable and 50% of the insurance risk. In addition the reinsurer provides cover on a per life basis for lump sum lives with greater than $1m retained.

C. Refers to claim payments that come due prior to the balance date

D. Dividend payments have been made on both ordinary and preference share issues

E. Preference shares rank below ordinary creditors to the company, but above policyholders. Under the terms of the preference share, 7% of the face value of the preference share is payable each year and the holder of the share has the option of redeeming the preference share at its face value at any time after the first 5 years since its issue.

APPENDIX B: Additional Information

Reserves (gross of reinsurance)	$000s
Risk Free Best Estimate Liability	(200,000)
Unearned Premium Reserve	10,000
Incurred But Not Reported Reserve (IBNR)	15,000
Disabled Lives Reserve (DLR)	50,000

- **No policies issued by Globex have a surrender value**
- **All reinsurance arrangements have an executed and legally binding contract in place.**

QUESTION 1: MARKING GUIDE

a)

(LO: 4.3 Calculate the capital base and the prescribed capital amount)

i)

Under LPS112, the capital base of a statutory fund is calculated as:

- the net assets of the fund; less
- all regulatory adjustments to the net assets of the statutory fund; plus
- Tier 2 Capital.

The regulatory adjustments are covered in Attachment B of LPS112 and in this case comprise of the following:

- Deferred Tax Asset: The deferred tax asset is an inadmissible for the purposes of calculating the capital base of the statutory fund
- The difference between the Adjusted Policy Liabilities and the Sum of the Policy Liabilities which is in effect applying the termination value minimum to the capital base. The adjusted policy liabilities is defined as the maximum of the Termination Value (which is equal to the IBNR + DLR + UPR given there is no surrender value) and the Risk Free BEL

The capital base for the statutory fund is calculated as:

- Capital Base = \$150m (Net assets)

  -\$5m (Deferred Tax Asset)

  - [max (\$10m + \$15m + \$50m, (\$200m)) x 50% - \$30m)
  (Reinsured Adjusted Policy Liability – Net Policy Liability

  \$150m - \$5m – 7.5m = \$137.5m

Marking Guide

- **1 mark for DTA exclusion**
- **1 mark for correct calculation method and answer. Can give 0.5 marks if net assets are correct**

2 marks total

ii)

Under LPS112, the capital base of the shareholders (or general) fund is calculated as:

- the net assets of the fund; less
- all regulatory adjustments to the net assets of the general fund

The regulatory adjustments are covered in Attachment B of LPS112 and in this case comprise of the following:

- Preference Share: the fact that the preference share ranks above policyholders means that it is not eligible as Additional Tier 1 capital under LPS112. In addition, LPS112 also does not allow the preference share to be redeemable at the option of the holder.

The capital base for the shareholders fund is calculated as:

- Capital Base = $88m (Net assets)
- - $50m (Preference Share Capital)
- = $38.0m

Marking Guide

- **1 mark for correct answer**

iii)

The capital base of the company as a whole is the sum of the capital base of its constituent parts. Hence the capital base is calculated as:

Capital Base = Capital Base of Statutory Fund + Capital Base of Shareholders Fund

- = $137.5m + $38m
- = $175.5m

Marking Guide

- **1 mark for correct answer ie. Adding answer from (i) and (ii) together correctly**

Maximum of 4 marks for part a)

b)

(LO: 4.4 Understand the internal capital adequacy assessment process)

Random Risk Charge

- Use a policy by policy projection model (likely grouping model policies into model points given runtime considerations) to run mortality / morbidity / termination decrements stochastically across a large number of simulations to get a probability distribution function. This can then be used to determine the 99.5th percentile outcome and this would form the basis of the random risk charge
- Consider variability of claims from year to year based on experience studies. For example, the actual to expected percentage for each year may be assessed against the average over a number of years to make a rough assessment of what a 1 in 200 year event may be.
- Consider the impact of the reinsurance arrangements here in terms of the random risk. The reinsurance arrangements have a per life retention of $1m for lump sum business and the methods noted above would need to consider the impact this would have on the random risk charge

- Consideration of market practice. This information may be available through a number of channels (mention at least 2 for 1 mark – no ½ marks):
  - Consultancies
  - Actuaries Institute Committees
  - Reinsurers etc

Marking Guide

- **1 mark for each reasonable suggestion**

Maximum of 3 Marks

Future Risk Charge

- Consideration of trend of actual vs expected results from year to year
- Consider the amount of data that is has been used to determine estimates of basis. Less data will increase the misestimation risk in determining best estimate assumptions
- Consider market trends over the past number of years for profitability by line of business.
- Sources of information include(must have at least 3 for 1 mark otherwise nil marks):
  - APRA published quarterly statistics (look at trends in experience losses in the industry)
  - Similar companies financial reports
  - Internal Experience studies
  - Reinsurers
  - Consultants
  - Industry papers and reports (e.g. IAA taskforce)
  - Internal capital model parameterization

Marking Guide

- **1 mark for each reasonable suggestion**

Maximum of 3 Marks

Event Risk Charge

- Review portfolio for any concentration of risk (e.g. geographical proximity if information is available)
  - Feedback on pandemic and catastrophe risk from companies who work in this area – e.g. general insurance consultants
  - Sources include external consultancies

Marking Guide

- **1 mark for each reasonable suggestion**

Maximum of 2 Marks

Maximum of 8 marks for b)

c)

See attached spreadsheet

(LO: 4.3 Calculate the capital base and the prescribed capital amount.)

RFBEL (at 4%)	**-175,187,000**

<u>LAGIC Stresses (Expected Cashflows)</u>	**Stress ($000s)**
Random Mortality / Morbidity Stress	**116,211**
Future Mortality / Morbidity Stress	**149,520**
Event Stress	**500,000**

Marking Guide

- **2 marks for calculation of RFBEL (1 for method 1 for calculation close to correct)**
- **1 mark for extra assumptions on recovering profitability**
- **1 mark for calculating a liability as part of the process**

Up to 2 marks for calculating stresses

- **2 marks if 3 stresses calculated correctly using correct method**
- **1.5 marks if 2 stresses calculated correctly using correct method**
- **1 mark for 1 method calculated correctly using correct method**
- **0.5 mark if one correct method (do not penalize for incorrect discounting) and no correct answers**

Maximum of 6 marks for c)

d)

(LO: 4.2 Describe the different types of capital that can be utilised by life companies)

Alternative ways the Globex may consider reducing or eliminating the asset concentration risk charge, and the advantages and disadvantages of each approach include:

- Using another reinsurer for some of their business

  Advantages: Reduce exposure to single reinsurer; Greater diversity of support with a different reinsurer

  Disadvantages: May not be able to get as good a deal in the market, on the other hand competition may result in improved terms

- Having the reinsurer deposit back some assets with Globex to cover any liabilities (e.g. DLR / IBNR)

  Advantages: Would reduce the potential for an asset concentration risk to apply

  Disadvantages: Reinsurer may not agree or charge more as their assets are encumbered

- Add a form of acceptable collateral against the counterparty risk as allowable under LPS117

  Advantages: Would reduce the potential for an asset concentration risk to apply

  Disadvantages: May result in additional costs (e.g. a guarantee) or some assets being encumbered (e.g. trust arrangement)

- Increasing retentions of the business

  Advantages: Reduce asset concentration risk charge that would apply

  Disadvantages: May not be within the risk tolerances / strategy of Globex to retain as much business; May not get as good a deal from the reinsurer if less business is ceded.

- Increasing capital holdings to increase the value of assets of the statutory fund

  Advantages: Assuming the capital is available, then an easy solution which does not rely on third parties

  Disadvantages: Does not effectively improve the asset concentration position as only the Value of Assets of the statutory fund is improved.

The candidate should then choose a preferred method, justify the choice and then describe the impact on target capital (the internal measure of capital which should be higher than prescribed capital to provide a safety margin)

Marking Guide

- **1 mark for each suggestion and 1 mark for each advantage / disadvantage for each suggestion (ie maximum of 3 marks per suggestion). To a maximum of 9 marks.**

- **1 mark for choosing option**
- **1 mark for reason**
- **1 mark for impact on target capital**

Maximum of 12 marks for d).

QUESTION 2 (30 MARKS)

Omega Life Insurance is a new insurance company operating in the newly formed nation of Utopia. Omega Life plans to offer death cover to small community groups which will cover members of that group. The policies issued all renew at 1 July of each year with all premiums payable annually in advance. The policies that Omega plans to offer have a term of 5 years, are not underwritten and have a pre-existing condition exclusion applied during the 5 years of the policy term (the community groups can choose to lapse over that term).

Omega Life plans to write the following volumes of new business (all schemes are written at 1 July). All premiums are paid annually in advance at 1 July of each year.

Year ending 30 June	New Business Volumes	
	Number of New Policies	Average Policy Annual Premium ($000s)
2014	4,000	800
2015	6,000	950
2016	9,000	1,200
2017	12,000	1,350

The following assumptions have been developed for the purposes of business forecasting:

- **Loss Ratio: 75% of premium**
- **Initial Commission: 30% of first year premium**
- **Renewal Commission: 0% or premium**
- **Maintenance Expenses: 12% of each years' premium plus a flat $1m per annum**
- **Lapse Rate: 12% at each scheme renewal date**
- **Premium Growth Rate: 0% p.a.**
- **DAC Amortization: Straight line amortization over the term of the policy**
- **IBNR: Calculated as 25% of expected claims over the next 12 months**

Omega Life uses an accumulation method to calculate its policy liabilities.

- **Investment Income: 4.0% p.a.**
- **Capital: Capital is held at the maximum of $10 million and 115% of premium income**
- **Tax at 30% of profits**

a) You have been asked to develop a business forecast for 2014 – 2017 for the life insurance business of Omega Life Ltd based on the assumptions listed above. The company has developed a standard template to be completed for the purposes of presenting the business forecast to the board.

Your student has copied the above assumptions into a spreadsheet and has already created a projection of premium revenue based on the assumptions above. This information along with the company's planning template has been provided in the accompanying spreadsheet.

Complete the business forecast for 2014 – 2017 for Omega Life. Clearly identify any assumptions that you make in putting together the forecast. You may assume these calculations and assumptions are performed correctly in the spreadsheet. You may submit the spreadsheet for your answer but you must clearly label each item of your answer. (9 Marks)

b) It is now mid-2014 and Omega Life has not written as many policies as it planned. However, the company has been able to write a number of policies with high average premium size. The details of the experience for the 2014 year are listed below:

New Business Volumes	
Number of Policies	1,500
Average Policy Size	1,400
Loss Ratio	85%
Actual investment income	6%

Notes:

Claims Incurred includes claims notified and IBNR

All other experience items are consistent with those assumed in the forecast

Omega Life's board have asked you to:

i) provide an analysis of profit and

ii) give your advice on what the analysis means for the business.

Your analysis of profit must be provided in the following format:

Analysis of Profit for Omega Life Ltd	$
Forecast 2014 Profit (pre-tax)	
Impact on Pre-tax profit resulting from	
1) Number of New Business Sales	
2) Average size of New Business Sales	
3) Claims Experience	
4) Investment Income Experience	
5) Other	
Actual 2014 Profit (pre-tax)	

(9 Marks)

c) As a result of the experience in 2014, the board and management are considering the strategy for Omega Life going forward. Some of the options for the business going forward to be considered include:

i) Increasing business volumes by increasing the level of upfront commission;

ii) Changing the investment mandate to allow the company to invest in corporate bonds with BBB and lower levels of credit rating; and

iii) Removing the 5 year pre-existing condition exclusion on the policies and instead to fully underwrite all lives that will be given cover.

The Board has asked for your opinion on each of these options. Your opinion on each option should cover the following items:

- **The expected impact on the profit and loss forecasts;**
- **The expected impact of the level of risk undertaken by the company; and**
- **Whether or not the company should implement this strategy**

(12 Marks)

Attachments

1. **C2B_LAQ2_(student notebook)**

QUESTION 2: MARKING GUIDE

a)

(LO 6.2: Design a budgeting/planning process: Construct a practical budgeting process)

The forecast profit and loss is shown below (and included in the attached solution spreadsheet). The marks for each item are shown in the far right column (with comments relating to each below)

PROFIT and LOSS (Forecast)	2014	2015	2016	2017	Marks	Comments
REVENUE						
Premium	3,200,000	8,516,000	18,294,080	32,298,790	0	Simply the sum of the premiums provided by the analyst for each year
Investment Income	426,544	537,332	1,176,621	2,126,936	1	Calculate as 4% x (capital + premium - initial commission) + 4%/2 x (claims incurred + main expenses) or something similar. Student should comment on calc of investment income
Total Revenue	**3,626,544**	**9,053,332**	**19,470,701**	**34,425,727**		
EXPENSES						
Initial Commission	-960,000	-1,710,000	-3,240,000	-4,860,000	1	Initial Premium x 30%
Maintenance Expenses	-1,384,000	-2,021,920	-3,195,290	-4,875,855	1	Maintenance Expense Assump x Premium
Claims Incurred (excluding IBNR)	-1,800,000	-4,790,250	-10,290,420	-18,168,070	1	Loss ratio x premium x (1 - 0.25) (the latter allowing forIBNR)
Change in Policy Liability	168,000	179,250	224,610	80,117	1	Elements of the policy liability are shown below
Total Expenses	**-3,976,000**	**-8,342,920**	**-16,501,100**	**-27,823,808**		
Pre-Tax Profit	**-349,456**	**710,412**	**2,969,602**	**6,601,919**		
Tax (at 30%)	**104,837**	**-213,124**	**-890,880**	**-1,980,576**	0	**30% tax on pre-tax profit**
Net Profit After Tax (NPAT)	**-244,619**	**497,289**	**2,078,721**	**4,621,343**		
Supporting Information						
IBNR	600,000	1,596,750	3,430,140	6,056,023	1	0.25 x loss ratio x premiums
DAC	-768,000	-1,944,000	-4,002,000	-6,708,000	2	Calculated based on run off of intial premium for each new business cohort
Policy Liability	**-168,000**	**-347,250**	**-571,860**	**-651,977**		
Capital Required	**10,000,000**	**10,000,000**	**21,038,192**	**37,143,609**	1	**Calculated as max(10m, 115% x premium)**
					9	No mark if assumption is unreasonable

To maximum of 9 marks. Marks awarded if using an alternative approach with a reasonable stated assumption. Zero marks if assumptions are not reasonable.

b)

(LO 5.3: Analysis of Profit and Distributions to Policy Owners: Construct a practical analysis)

i) The student should have used the template provided with the spreadsheet to get the following:

PROFIT and LOSS (Forecast)	2014	2014	2014	2014	2014
	Forecast	(1) Number of New Policies	(2) Average New Policy Premium	(3) Claims Experience	(4) Investment Income Experience
REVENUE					
Premium	3,200,000	1,200,000	2,100,000	2,100,000	2,100,000
Investment Income	426,544	397,577	410,612	407,493	611,610
Total Revenue	**3,626,544**	**1,597,577**	**2,510,612**	**2,507,493**	**2,711,610**
EXPENSES					
Initial Commission	-960,000	-360,000	-630,000	-630,000	-630,000
Maintenance Expenses	-1,384,000	-1,144,000	-1,252,000	-1,252,000	-1,252,000
Claims Incurred (excluding IBNR)	-1,800,000	-675,000	-1,181,250	-1,338,750	-1,338,750
Change in Policy Liability	168,000	63,000	110,250	57,750	57,750
Total Expenses	**-3,976,000**	**-2,116,000**	**-2,953,000**	**-3,163,000**	**-3,163,000**
Pre-Tax Profit	**-349,456**	**-518,423**	**-442,388**	**-655,507**	**-451,390**
Tax (at 30%)	**104,837**	**155,527**	**132,716**	**196,652**	**135,417**
Net Profit After Tax (NPAT)	**-244,619**	**-362,896**	**-309,671**	**-458,855**	**-315,973**
Supporting Information					
IBNR	600,000	225,000	393,750	446,250	446,250
DAC	-768,000	-288,000	-504,000	-504,000	-504,000
Policy Liability	**-168,000**	**-63,000**	**-110,250**	**-57,750**	**-57,750**
Capital Required	**10,000,000**	**10,000,000**	**10,000,000**	**10,000,000**	**10,000,000**

To do this the coloured cells need to be updated (the first column is the forecast in question (a)). The table below is the completed numbers as required for the board:

Analysis of Profit for Omega Life Ltd	
	$
Forecast 2014 Profit (pre-tax)	**-349,456**
Impact on Pre-tax profit resulting from	
1) Number of New Business Sales	**-168,968**
2) Average size of New Business Sales	**76,035**
3) Claims Experience	**-213,119**
4) Investment Income Experience	**204,117**
Actual 2014 Profit (pre-tax)	**-451,390**
Actual Profit should be the same as in b(i)	

1 mark for each impact item and Actual 2014 Profit up to a maximum of 5 marks. No extra penalty for an error which was made in part (i). No marks if number is clearly not reasonable.

ii)

- Sales have been under expectations and this has reduced profits below expected. The implication is that sales volumes need to increase in order for Omega life to cover their fixed costs (particularly the $1m fixed maintenance expense cost)
- Selling larger sized business, but less business may increase the variability of lapse experience as there is less diversification than expected across a number of schemes
- Claims experience is far poorer than expected. If this is to continue and become part of best estimate assumptions, DAC may not be recoverable
- Investment income experience was better than expected. This may be due to a number of factors. If it is due to taking on additional risks, then the investment profit is unlikely to continue. On the other hand, if the investment market has changes in the year, the investment income assumption may need to be reviewed
- Other reasonable points to a maximum of 2 marks

(1 mark per point to a maximum of 4 marks but points must be relevant and insightful. No marks for just repeating what is in the question. Emphasis is on what on what it means to the business.)

Marking Guide

- **Up to 5 marks for analysis**
- **Up to 4 marks for implications for the business**

c)

(LO 13.3: Clearly and simply explain major/relevant implications of results/outcomes/interpretations/assumptions to stakeholders.)

i)

Increasing business volumes by increasing the level of upfront commission;

The expected impact on the profit and loss forecasts;

- Initial commission will increase and hence the DAC will increase considerably
- Would need to consider the potential impact on whether the DAC will be recoverable with an increase in upfront commissions. The current profit margin (before the flat $1m expense) is 7% (1 – (75% + 30% / 5 + 12%)). Increasing the upfront commission much more may make the DAC unrecoverable which would result in a significant profit writedown as the business goes into loss recognition.

(1 mark for each comment)

The expected impact of the level of risk undertaken by the company;

- Lapse risk is a main concern as this could have a significant impact on the P&L of the company and eventually the capital position should lapses prove to be worse than expected
- Another risk is that the volumes of new business increase well above plan such that the company does not have sufficient capital to support this risk

(1 mark for each reasonable point)

For each option, your opinion as to whether the company should implement this strategy

- A reasonable opinion is that the strategy is risky and too great an increase in initial commissions will likely have a negative impact for the reasons noted above.

(1 mark)

ii)

Changing the investment mandate to allow the company to invest in corporate bonds with BBB and lower levels of credit rating;

The expected impact on the profit and loss forecasts;

- Likely increase in yields would increase investment income
- However, the investment income would be subject to greater volatility in particular when there are increased spreads on lowly rated corporates held or as the result of a default

(1 mark for each reasonable point)

The expected impact of the level of risk undertaken by the company;

- Greater risk if the credit rating of the bonds is overall poorer
- Should be noted that the level of risk is dependent on the scope of bonds that the company would hold (going down to BBB may be okay, but much lower would increase risk further)

(1 mark for each point)

For each option, your opinion as to whether the company should implement this strategy

- Reasonable opinion should be open to this option, but limiting the exposure to a reasonable level of bond (e.g. BBB) and limiting total exposures across the investment t portfolio.

(1 mark)

iii)

Removing the 5 year pre-existing condition exclusion on the policies and instead to fully underwrite all lives that will be given cover

The expected impact on the profit and loss forecasts

- Likely increase in initial expenses due to the need to underwrite all persons getting cover.
- Experience may be expected to improve above the pre-existing exclusion approach and hence the loss ratio may be lower
- The question of whether the larger upfront commissions is recoverable is also a concern and any significant increase in upfront costs without an appropriate increase in premium and/ or reduction in loss ratio may result in a significant loss as the result of loss recognition

(1 mark for each point up to a maximum of 2 marks)

The expected impact of the level of risk undertaken by the company;

- The insurance risk may be reduced as the business is underwritten rather than using a pre-existing condition exclusion
- However, there is an expense risk due to the need to hire / train underwriters etc which would need to be borne out of future profits (which is dependent on future new business income)

(1 mark)

For each option, your opinion as to whether the company should implement this strategy

- The approach seems reasonable, but the additional costs of the underwriting approach must be weighed up against what premiums can be charged and the expected loss ratios for this business would be

(1 mark)

Marking Guide

- **Reasons must be specific to the option to get marks**
- **Up to 4 marks per option (there are three options) but a maximum of 3 if no opinion on whether or not the company should implement**
- **The point made must be able to be understood by the Board**

To a maximum of 12 marks.

END OF PAPER

END OF PAPER