INSTITUTE AND FACULTY OF ACTUARIES

Scenario Material

14 September 2022 (am)

Subject CP3 – Communications Practice
Core Practices

INSTRUCTIONS FOR CANDIDATES

You are provided with this advance information to enable you to read and understand it in your own time and not under examination conditions. Please note that this is an examination to test your ability to communicate technical information to a non-technical audience. It is not a test of your technical actuarial knowledge or skills. As such, any technical actuarial information or techniques needed to answer the question will be provided to you. You do not need to spend time revising other subjects or researching further detail on the topics covered in the paper.

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LifeCo is a life insurance company operating in Country X selling the following products:

- term assurance
- Critical Illness (CI) insurance.

January 2022 saw the start of a pandemic, which affected Country X. The country saw deaths well in excess of levels seen in recent years and a lockdown that restricted people's freedom to travel and meet others and that closed hospitality venues and all but essential shops. The country's healthcare system has been under strain, with many appointments for medical diagnoses and treatment cancelled.

You have been provided with the following:

- An extract from a manual given to new staff at LifeCo
- The CEO's statement from the Annual Report and Accounts
- A recent article from *The Daily*, a newspaper from Country X
- An extract from an experience analysis report from LifeCo with results up to 30 June 2022.

Below is a summary of the key features of the products that LifeCo sells:

	Term assurance	*CI insurance*
Benefit trigger	Death, or diagnosis of terminal illness that, in the view of LifeCo's Chief Medical Officer, gives the policyholder a life expectancy of less than 6 months.	Death or a confirmed diagnosis of one of the 52 illnesses listed in the policy.
Maximum term	50 years	30 years
Minimum term	5 years	5 years
Average term	28 years	15 years
Premium type	Monthly premium that stays fixed during the term.	Monthly premium that stays fixed during the term.
Minimum entry age	18	18
Maximum entry age	75	65
Maximum cover age	85	75

[Extract from a manual given to new staff at LifeCo]

Definition of common terms

Liabilities: present value of future claims plus present value of future expenses less present value of future premiums. This represents the expected obligations on LifeCo as a result of the business that it has on its books. This number is typically positive because we expect claims to increase as individuals age but the premium stays constant over the term of the policy. We therefore charge more than the expected claims cost in year one, and over time the expected claims cost increases to the point that in the later years it exceeds the premium charged.

Reserves: assets held to back liabilities. As far as possible, reserves are held in matching assets to mitigate the impact of yield changes on the balance sheet.

Capital: total assets held less reserves. This represents the assets that are attributable to shareholders and provides a contingency should claims be higher than expected in future years.

Solvency ratio: in Country X, the solvency ratio is defined as the total assets held (i.e. reserves plus capital) divided by liabilities. The solvency ratio is a measure of how well capitalised the company is. The regulator in Country X sets a minimum solvency ratio that life insurance companies must meet, which is based on the specific risks being run by the insurance company. The minimum solvency ratio is the point at which the insurance company would be able to meet its liabilities with a probability of 99.5%. For LifeCo, the most recently calculated minimum solvency ratio is 148%.

Matching assets: investments with a payment profile designed to meet the liabilities as they fall due. The duration of the assets will be very close to the duration of the liabilities, meaning that assets and liabilities will have a similar sensitivity to yield movements.

[Extract from Annual Report and Accounts for financial year 1 July 2021 to 30 June 2022]

CEO's statement

Dear shareholders,

2022 will go down in history as an unprecedented year for LifeCo, and indeed our wider society, with the pandemic affecting almost every aspect of life since January. I would like to take this opportunity to thank our dedicated employees, who have overcome challenges, and in some cases personal tragedy, to ensure that we did not falter in our obligations to policyholders.

It is the principal responsibility of an insurance company to pay claims, and as a life insurer, these payments are often a lifeline to our policyholders' beneficiaries. Events such as those we have seen to date this year reinforce the vital role that life insurers play in our society, and at times like these, it is vital that we provide stability and meet our obligations.

Inevitably, our financial position has been affected by the pandemic. We have paid significantly more claims than we would have expected in 2022 to date in our life insurance portfolio. We must also recognise that this crisis is not yet over, and sadly we are likely to see higher mortality rates in the coming financial year than we may expect in a more standard year. As such, we have had to strengthen our reserves in anticipation of the higher claims to come. The increase in claims for life insurance so far has been offset to a small extent by a reduction in claims for our CI products. However, increases in reserves mean there is no net benefit from the drop in CI claims.

Overall, the pandemic has resulted in a net loss on all accounting measures in 2022, and as a result, our solvency ratio has fallen from 220% as at 30 June 2021 to around 190% as at 30 June 2022. It should be noted that this solvency position is still higher than our target minimum of 180%, and significantly higher than regulatory minimum levels. The reserve strengthening also means that our current expectations of the progression of the pandemic is fully reflected in the current solvency ratio.

We will continue to face challenges as this pandemic continues, and the future is still uncertain. However, we have shown that we are a stable and resilient insurer, providing security to our policyholders at the times they need it most and weathering the biggest test that our industry has seen in recent memory.

Best regards,
Valentina Burbridge

CEO, LifeCo

[Extract from *The Daily*, a newspaper published in Country X]

Will an increase in cancer rates be the legacy of the pandemic?

As the country shut down in January, with many people effectively confined to their homes except for a modest walk or a trip to buy groceries, our hospitals were still a frenzy of activity. The burden put on our healthcare providers is unprecedented, with huge numbers of patients admitted to intensive care beds in a very short space of time. To deal with this demand, many routine procedures were deprioritised, and many tests and appointments were cancelled.

This was a necessary but unwelcome precaution to allow staff and resources to focus on patients directly impacted by the pandemic, but the after-effects are likely to be felt for many years after the pandemic has subsided. Looking at the number of positive cancer diagnoses over the last 6 months gives some insight into what is to come. Nationally, from January to June 2021, 647,000 people were diagnosed with cancer. Jump forward a year and the equivalent figure for 2022 has been 386,000 – a drop of around 40%.

It seems unlikely that true cancer rates have dropped so suddenly, and so the most plausible explanation is that a significant number of cancer cases are going undiagnosed. In the context of the cancelled appointments and the halt in various screening programs, this makes sense, but another factor has been people's reluctance to engage with medical services at all.

A recent survey of *The Daily*'s readers suggested that 68% of people are more reluctant to visit their doctor now than before the pandemic. A range of reasons were given, including worries about contracting the virus in a healthcare setting and not wanting to put an additional burden on the health service.

'Catching things early is the best way to save lives', says oncologist Dr Ishan Jones. 'It worries me that there are many people out there who face being diagnosed with cancer at a far later stage, when the cancer is more advanced, than should be the case'. He would encourage everyone to seek medical help if they have concerns about their health, and let professionals judge whether something needs urgent attention.

'We will see an increase in more advanced cancers in the aftermath of this pandemic', says Wendy Smith, Professor of Medicine at the country's top medical school, 'and we should invest in testing and treating the individuals affected as soon as possible. We do not want to look back and conclude that the wave of cancer deaths following the pandemic was an unnecessary legacy, because we didn't act at the time'.

[Extract from an internal experience analysis report from LifeCo]

The table below sets out the experience analysis results for LifeCo's portfolio to 30 June 2022. Monetary figures shown are in $million ($m).

Year ending 30 June	*Life insurance*			*CI insurance*			*Total*		
	Expected claims (E)	*Actual claims (A)*	*A/E (%)*	*Expected claims*	*Actual claims*	*A/E (%)*	*Expected claims*	*Actual claims*	*A/E (%)*
2018	386	375	97	19	14	74	405	389	96
2019	401	408	102	32	36	113	433	444	103
2020	452	449	99	53	50	94	505	499	99
2021	467	470	101	75	77	103	542	547	101
2022	509	715	140	98	76	78	607	791	130

Notes:

1. Life claims experience has been stable, reflecting the fact that we have a large book and a good understanding of the underlying drivers of experience.
2. We saw an increase in claims of 40% over the year to 30 June 2022 despite the pandemic starting in January. This is broadly in line with our competitors' experiences once product and business mix are allowed for.
3. As well as approximately $200m additional claims paid in the year to 30 June 2022, reserves have been set up for life business of approximately $150m. This is due to our change in best estimate claims assumptions in 2022 and beyond as a result of the pandemic.
4. The early volatility on CI experience in 2018 and 2019 is within expectations, given the low volume of claims at that time.
5. The drop in our CI claims experience in 2022 has been seen across the market. When looked at in a more granular way across our financial year, claims experience was tracking around 100% compared to what we previously expected in the first half of the year, but dropped after the start of the pandemic. It is likely that the drop in CI claims experience is due to the drop in diagnoses generally across the population, as widely reported in the press.
6. We expect there to be a catch-up in CI claims in the coming years, as policyholders who should have been diagnosed with a CI in the first half of 2022 receive their diagnosis. We have therefore increased reserves by approximately $25m in anticipation.

END OF SCENARIO MATERIAL