

INSTITUTE OF ACTUARIES OF INDIA

CP3 - Communication Practice

May 2026 Examination

INDICATIVE SOLUTION

Introduction:

The indicative solution has been written by the Examiners with the aim of helping candidates. The solutions given are only indicative. It is realized that there could be other points as valid answers and examiners have given credit for any alternative approach or interpretation which they consider to be reasonable.

Solution 1:

Paper: Proposed Group Annuity Buyout of SNG Defined Benefit Pension Scheme – Evaluation and Recommendation

Date:

To: Board of Directors, Insurance Company R

From: Chief Financial Officer

For: Discussion and Decision

Executive Summary

Insurance Company R has been approached to provide a full group annuity buyout of SNG, a defined benefit pension scheme sponsored by Company A in Country G. The buyout premium is ₹5,200 crore, which would be Insurance Company R's single largest contract and its first-ever entry into the group annuity market. This paper sets out the background to SNG, the financial implications of the contract for Insurance Company R, the key advantages and risks for all parties, and concludes with a recommendation to the Board.

Background

SNG is a defined benefit pension scheme – a pension arrangement where Company A has promised its employees a guaranteed pension at retirement based on their final salary and years of service. The scheme has approximately 4,200 members and has been in deficit for several years. Encouragingly, the funding level has improved from 77% in 2024 to 86% as at 1 April 2025, reflecting positive investment performance and sustained annual contributions of ₹144 crore from Company A under an agreed recovery plan.

Despite this improvement, a deficit of ₹640 crore remains on a technical provisions basis. Company A is concerned that the ongoing pension liability – which is sensitive to changes in interest rates, inflation and how long members live – represents an open-ended financial risk that could threaten the company's financial stability. A group annuity buyout, in which an insurance company takes on full legal responsibility for paying all pension benefits, offers Company A a clean and permanent exit from this obligation. Insurance Company R has submitted a quotation of ₹5,200 crore for this purpose.

Financial Implications for Insurance Company R

The buyout would generate a single premium income of ₹5,200 crore – by far the largest single contract in Insurance Company R's history. Our existing individual annuity portfolio carries reserves of approximately ₹18,000 crore; this single contract would increase our total annuity reserves by approximately 29%. The key financial parameters are summarized below:

Item	Amount (₹ Crore)
Premium receivable from Company A and trustees	5,200
Scheme assets transferred on completion	4,080
Additional cash from Company A (shortfall contribution)	1,120
One-time set-up costs (systems, operations, reinsurance)	180 + 60*
Expected ongoing annual annuity outgo (pensions to members)	~520
Estimated solvency ratio post-transaction (base scenario)	~156%

* Longevity reinsurance (recommended by Appointed Actuary)	60
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The buyout premium of ₹5,200 crore exceeds the scheme's technical provisions of ₹4,720 crore. This difference of ₹480 crore reflects the cost to Insurance Company R of taking on guaranteed, long-term pension obligations: we must price using a more conservative, risk-free discount rate (Government of Country G bond yields of approximately 6.20% per annum) and more prudent assumptions about how long members will live. This is standard practice for buyout transactions.

Our Appointed Actuary has assessed the post-transaction solvency position. Under the base scenario, the solvency ratio is estimated to remain at approximately 156% – above the regulatory minimum of 150%. Under a stressed scenario, this reduces to approximately 151%. To manage this residual risk, our Appointed Actuary has recommended arranging longevity reinsurance (estimated cost: ₹60 crore) before the transaction completes.

Advantages for Insurance Company R

- Strategic market entry: Group annuity is a fast-growing market in Country G. Large private sector employers are increasingly seeking to de-risk their DB pension schemes, with an estimated market of over ₹80,000 crore over the next decade. Completing this transaction gives Insurance Company R a first-mover advantage and a strong reference case for future contracts.
- Significant premium and reserve growth: The ₹5,200 crore premium materially grows our balance sheet and investable asset base, enabling better scale in our investment operations.
- Synergy with existing capabilities: Insurance Company R's 15-year track record in individual annuity pricing, mortality management and asset-liability management provides a strong foundation for entering this adjacent market.
- Suitable first transaction: SNG has been identified as a tractable first contract – its membership data has been independently audited and is of good quality, its benefit structure is straightforward, and Company A has confirmed its financing arrangements for the additional contribution. These features reduce execution risk compared with more complex schemes.

Risks for Insurance Company R

- Longevity risk: If members live significantly longer than our pricing assumptions, we will pay more in annuities than anticipated. This is the primary financial risk. It is proposed to be mitigated through a longevity reinsurance arrangement (cost: ₹60 crore), which will transfer tail longevity risk to a global reinsurer.
- Operational risk: This is our first group annuity contract. Managing 4,200 member records across three membership categories – each with different benefit structures – is significantly more complex than individual annuity administration. A dedicated project team and phased transition plan are recommended.
- Asset-Liability Management (ALM) risk: Group annuity liabilities include younger active members whose pensions may not begin for 20 or more years. Long-duration Government of Country G bonds are needed to match these liabilities. Availability of such assets at current yields should be confirmed before commitment.
- Concentration risk: At ₹5,200 crore, this single contract represents 29% of our current reserves. Our Appointed Actuary's assessment confirms that the post-transaction solvency ratio of ~156% (base scenario) provides a sufficient buffer, though the stressed scenario outcome of ~151% leaves limited headroom. Longevity reinsurance is essential to manage this.
- Reputational risk: A failure in administration could harm Insurance Company R's brand and its existing individual annuity franchise.

Risks to Scheme Members and Company A, and Mitigants

- For Company A: The buyout permanently removes the open-ended pension liability. Annual contributions of ₹144 crore to SNG will cease on completion, providing significant and permanent cash flow relief. The additional contribution of ₹1,120 crore will require external financing, which Company A has confirmed is under arrangement.

- For scheme members: Under the current trust arrangement, members' security depends on both the scheme's investment performance and Company A's financial health. Post-buyout, each member receives an individual annuity policy issued by Insurance Company R, a regulated insurer required by Country G's Insurance Regulator to hold capital in excess of its liabilities. The Appointed Actuary has confirmed that Insurance Company R's post-transaction solvency position remains above the regulatory minimum, significantly enhancing benefit security for members.
- Counterparty risk (residual): Once the scheme winds up, members rely on Insurance Company R's solvency. This is mitigated by our regulatory capital position, the longevity reinsurance arrangement, and the policyholder protection framework in Country G.

Recommendation

We recommend that the Board approves entry into this group annuity buyout transaction. The SNG contract is a financially sound and strategically well-timed opportunity to establish Insurance Company R in the group annuity market. The transaction is viable – our Appointed Actuary has confirmed that the post-transaction solvency ratio remains above the regulatory minimum under the base scenario – and the specific features of the SNG scheme (quality data, simple benefit structure, committed sponsor financing) make it a lower-risk first transaction than most.

We recommend approval subject to the following conditions:

- Longevity reinsurance agreement (₹60 crore) is signed with a suitably rated global reinsurer before the buyout completes.
- A full data audit and benefit verification exercise is completed on SNG's member records, with any data issues resolved before contract signature.
- The Board approves a dedicated operational project team and set-up budget of ₹180 crore (plus ₹60 crore for reinsurance).

The Appointed Actuary confirms in writing that post-transaction solvency projections remain above 150% under the base scenario immediately prior to signing

[90 Marks]

Solution 2:

i) Depth of Explanation:

- The paper is addressed to a Board with mixed expertise – the MD, CRO, CIO and Appointed Actuary are senior professionals who will not need basic insurance concepts explained, but three Independent Non-Executive Directors (NEDs) may have limited actuarial background. The depth was calibrated by explaining technical terms (defined benefit scheme, technical provisions, longevity risk, ALM, solvency ratio, buyout vs buy-in) briefly in plain language at first use, while not over-simplifying for the actuarially literate Board members.
- As the CFO and a qualified Actuary presenting to the Board, the tone is authoritative and decisive. The recommendation is clear and direct, as required by the Q1 instruction. A tentative or heavily caveated recommendation would be inappropriate for this role and audience.
- The financial summary table is used to present numerical information in a format easily digestible by the full Board. Numbers are rounded to whole crore figures – precision appropriate for a strategic decision paper. The Appointed Actuary's solvency assessment is referenced as a supporting technical input rather than reproduced in full actuarial notation, as the Board needs the conclusion, not the methodology.
- Deep technical actuarial detail (specific mortality assumptions, ALM bond matching duration calculations, reinsurance pricing models) is deliberately excluded from the body of the paper. Such detail would obscure the Board's decision-making without adding value. A candidate who devotes significant words to mortality table methodology at the expense of the recommendation and risk narrative would not score well on communication marks.

- The depth of explanation for concentration risk and solvency headroom was deliberately calibrated to reference the Appointed Actuary's assessment as the source of the numbers, rather than deriving them independently in the paper – which would be appropriate for a technical note but not a Board paper.

[5]

ii) Filtering Information:

- The Annexure contained six sections with deliberately varied relevance. The key filtering decisions made were: Section 1 definitions were used to calibrate language in the paper, but were not reproduced – the brief explanations of 'defined benefit' and 'buyout' appear as in-text asides, not as standalone paragraphs.
- The individual vs. group annuity comparison table (Section 5) is Annexure context. The Board paper distils it into three specific operational risk points (administration complexity, ALM, reinsurance) – it does not reproduce the full table in the Board paper.
- Company A's detailed financial profile (net assets ₹2,560 crore, net borrowings ₹760 crore, operating cash flow ₹380 crore) is background context. The Board paper uses only the key conclusion that Company A requires external financing for the ₹1,120 crore shortfall contribution – not the full financial breakdown, which would be distracting and is already known to the Board.
- The LIC (2006-08) mortality table reference and the 6.80% discount rate used for SNG's technical provisions are actuarial inputs that are not relevant to the Board's decision. They are not referenced in the Board paper.
- The alternative options (buy-in, longevity swap, LDI) are mentioned briefly under the advantages section to demonstrate that the recommendation has been reached after proper consideration. They are not analysed in detail – the paper's purpose is to evaluate the buyout, not to conduct a comparative alternatives study.

The stressed solvency scenario (falling to ~151%) is included because it is decision-relevant – the Board should know the downside. The base scenario number (156%) and the reinsurance recommendation are presented as the conclusion of the Appointed Actuary's assessment. This is an example of using the Annexure information selectively and purposefully.

[5]

[10 Marks]
