

43rd India Fellowship Seminar

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Health Insurance- The Premium Predicament

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Agenda



Section 1



Case Study - The Premium Predicament



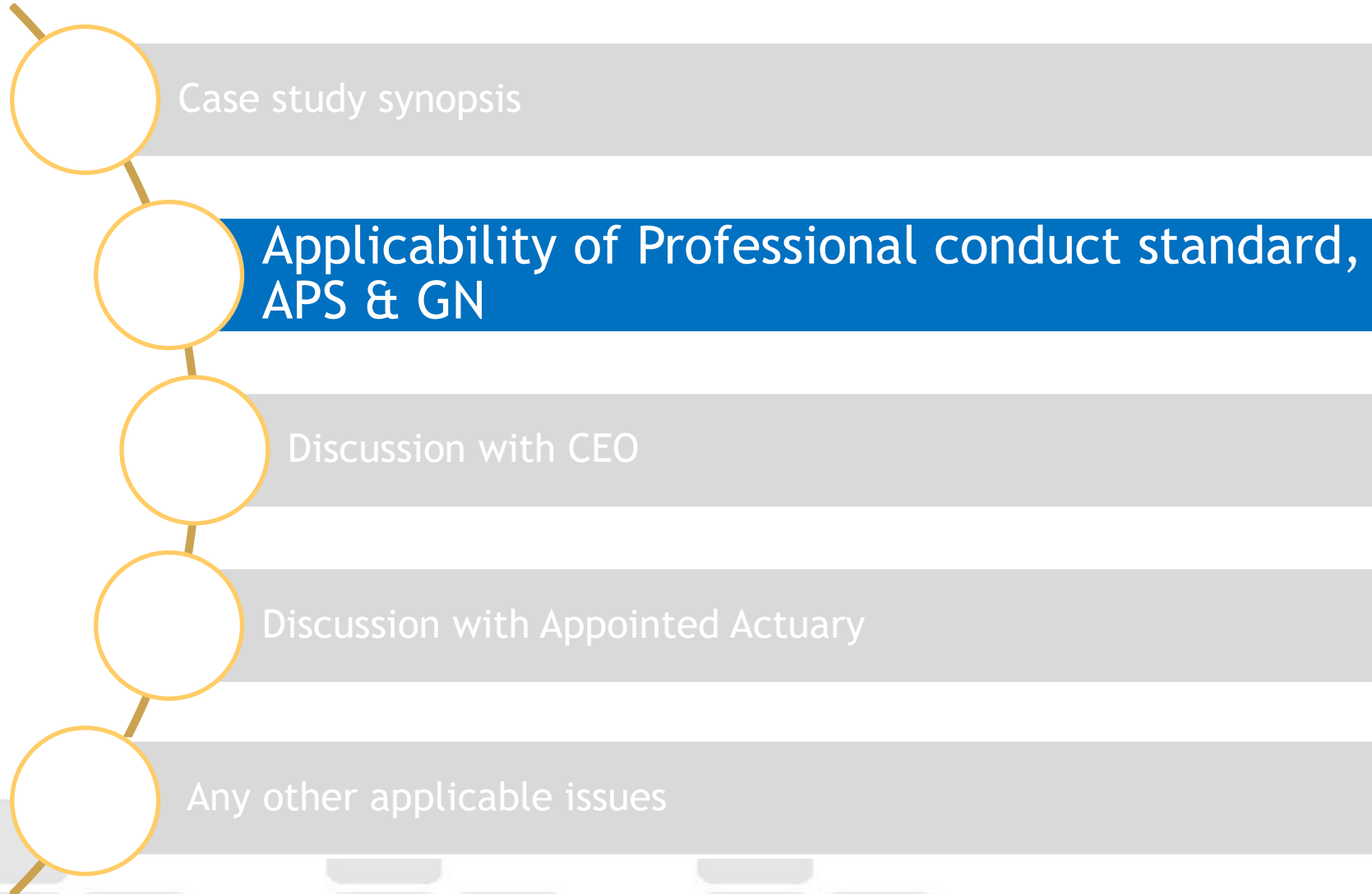
Current Situation:

- Recently joined as Appointed Actuary in a large standalone health insurance company.
- Leading a team of six officers, including one qualified actuary.
- The company is growing at a faster rate than its peers.
- Majority of the business comes from Group Health Insurance.

Challenge :

- The claim experience of the group is deteriorating with each passing year and incurred claim ratio has crossed 100% in the last year.
- These policies are due for renewal and there is strong competition in the market.
- In one of meeting chaired by CEO, Chief marketing officer mentions that there is no scope for increasing the premium as it will result in significant decrease of business.
- He strongly recommends that we need to keep premium same for these policies so that there is no impact on company Business this year and position can be reviewed on next renewal

Section 2



Applicability of professional conduct standard



Professional Conduct Standard

- *Section 4.1 - The actuary is expected to use best judgement in formulating advice and must have proper regard to any relevant professional guidance or other guidance.*

Reference

- Actuaries must analyze data, trends, and assumptions carefully before formulating advice
- Actuaries must follow actuarial practice standards (APSs) and professional codes.
- Actuarial models and assumptions should be reviewed regularly to reflect changing market conditions and emerging risks
- *Clearly explain assumptions, limitations, and risks in actuarial reports.*
- *Ensure decision-makers understand the financial and strategic implications of actuarial advice.*

Applicability of professional conduct standard



Professional Conduct Standard

- *Section 6.1 - Actuaries must ensure that their professional judgement is not compromised , and is not seen to be compromised , by any bias, conflict of interest or the undue influence of others*

Reference

- Any real or perceived compromise in judgment can impact actuarial credibility, regulatory compliance, and public trust.
- To uphold professional integrity, actuaries must
 - Disclose potential conflicts of interest.
 - Maintain transparency in decision-making.
 - Ensure recommendations are based on sound actuarial principles, free from undue pressure.

Applicability of professional conduct standard...contd

Actuarial Practice Standard (APS) 21

- *Section 2.2 -An Appointed Actuary shall comply with the provisions of the section 64 VA of the Insurance Act. 1938 (hereinafter referred to as Act) in regard to maintenance of required control level of solvency margin in the manner required under the said section and draw the attention of management of the insurer to any matter on which he or she thinks that action is required to be taken by the insurer to avoid any contravention of the Act or Prejudice to the interests of policyholders.*

Reference

In lines with these responsibilities, the Appointed Actuary must:

- Monitor solvency requirements and ensure compliance with regulatory provisions.
- Alert management if any corrective action is required to avoid breaches in solvency regulations.
- Advise on risk mitigation strategies to protect policyholder interests and ensure financial stability.
- Engage with stakeholders to ensure informed decision-making and regulatory alignment.

By adhering to Section 2.2, actuaries uphold regulatory compliance, safeguard policyholder security, and reinforce the financial integrity of the insurance industry

Applicability of professional conduct standard...contd

Actuarial Practice Standard (APS) 21

- *Section 5.1 - The Appointed Actuary shall ensure that the premium rates of the insurance products are fair and that the actuarial principles have been used in the determination of liabilities, i.e. calculation of reserves for incurred but not reported claims (IBNR) and other reserves (including incurred but not enough reported claims (IBNER) and premium deficiency reserve (PDR) etc., complying with relevant regulations*

Reference

In compliance with this standard, the Appointed Actuary must:

- Ensure premium adequacy to maintain solvency and policyholder protection.
- Apply actuarial principles in calculating reserves, including IBNR , IBNER and PDR.
- Ensure compliance with relevant insurance regulations to maintain financial stability.
- Advise management on necessary premium adjustments to mitigate underwriting risks.

By adhering to Section 5.1, actuaries uphold pricing integrity, regulatory compliance, and financial sustainability, ensuring that policyholders are charged fair and adequate premiums

Applicability of professional conduct standard...contd



Actuarial Practice Standard (APS) 21

- *Section 6.1 - The Appointed Actuary must satisfy himself that premium rates for business (new, renewal etc. as applicable) are fair, i.e., are neither excessive nor inadequate, that is to say sufficient in due course to enable the company to meet its liabilities both in tariff and non-tariff classes of business. If in future, such business is likely to be written on inadequate terms, it will require support from the free assets in the Shareholders' fund. The Appointed Actuary should consider the company's ability to continue to write such business in the context of how much capital is required and should inform the Board of Directors accordingly.*

Reference

In compliance with this standard, the Appointed Actuary must:

- Assess premium adequacy to ensure it aligns with expected claims and expenses.
- Evaluate solvency impact by considering whether inadequate pricing will require support from free assets in the Shareholders' Fund.
- Determine capital requirements for continued underwriting of such business.
- Advise the Board of Directors on potential financial risks if business is written at inadequate premium rates.

By adhering to Section 6.1, actuaries play a crucial role in maintaining financial stability, protecting policyholder interests, and ensuring regulatory compliance.

Applicability of professional conduct standard...contd



Actuarial Practice Standard (APS) 21

- *Section 6.2 - Whether the premium rates are appropriate is a probability statement and hence the Appointed Actuary must exercise his / her judgment. This judgment needs to be based on the use of sound techniques.*

Reference

In forming this judgment, the Appointed Actuary should consider:

- **Types of products and product mix** - Evaluating portfolio composition to assess risk exposure.
- **Claims costs, including claims handling expenses** - Ensuring premiums reflect expected claims and operational costs.
- **Adequacy of expense and acquisition cost provisions** - Assessing sustainability and cost recovery.
- **Impact of future inflation** - Factoring in potential cost increases affecting claims and expenses.
- By adhering to Section 6.2, actuaries ensure premium adequacy, financial stability, and compliance, protecting both policyholder interests and the insurer's long-term viability.

Applicability of professional conduct standard...contd



Actuarial Practice Standard (APS) 21

-Section 6.3 - Premium Rate Components - The Appointed Actuary should also analyze the insurer's own claims experience and, where possible, compare it with the industry experience. The analysis should consider both claims frequency and claim size.

Reference

In forming this analysis, the Appointed Actuary should consider:

- **Data Quality** - Ensuring reliable and complete claims data for analysis.
- **Claims Management Policies** - Evaluating how claims handling impacts experience.
- **Marketing and Underwriting Strategies** - Understanding their influence on claims patterns.
- **Case Reserving** - Reviewing reserving practices for claim adequacy.

By adhering to Section 6.3, actuaries ensure premium rates reflect actual claims risk, promoting financial stability and regulatory compliance.

Applicability of professional conduct standard...contd



Actuarial Practice Standard (APS) 21

Section 7 - Capital Requirements

- *7.1 - One of the important factors that will affect the financial position of an insurance company is its marketing strategy and the projected volume of business likely to be generated. The Appointed Actuary should form an assessment as to whether the projected volumes are realistic and advise the Board of Directors as to the capital requirements associated with writing the required volume of business.*

Reference

Key responsibilities include:

- Evaluating projected business growth to ensure forecasts are realistic.
- Assessing capital adequacy for underwriting the expected volume of business.
- Advising the Board of Directors on capital requirements to maintain solvency.
- Ensuring regulatory compliance with capital adequacy standards.

By following this Section 7.1, actuaries help to ensure that capital levels remain sufficient to support growth and policyholder security.

Applicability of professional conduct standard...contd



Actuarial Practice Standard (APS) 21

-Section 7.3 - The Appointed Actuary should as far as possible assess the capital requirements.

Reference

Key responsibilities include:

- Evaluating projected business growth to ensure forecasts are realistic.
- Assessing capital adequacy for underwriting the expected volume of business.
- Advising the Board of Directors on capital requirements to maintain solvency.
- Ensuring regulatory compliance with capital adequacy standards.

By following this Section 7.1, actuaries help to ensure that capital levels remain sufficient to support growth and policyholder security.

Applicability of professional conduct standard...contd



Actuarial Practice Standard (APS) 21

Section 8 - Actuarial investigations

-8.1 Section 13(6) of the Act requires the Appointed Actuary to perform an annual investigation into the financial condition of certain sub classes of general insurance business unless exempted by the Authority in terms of the proviso thereto.

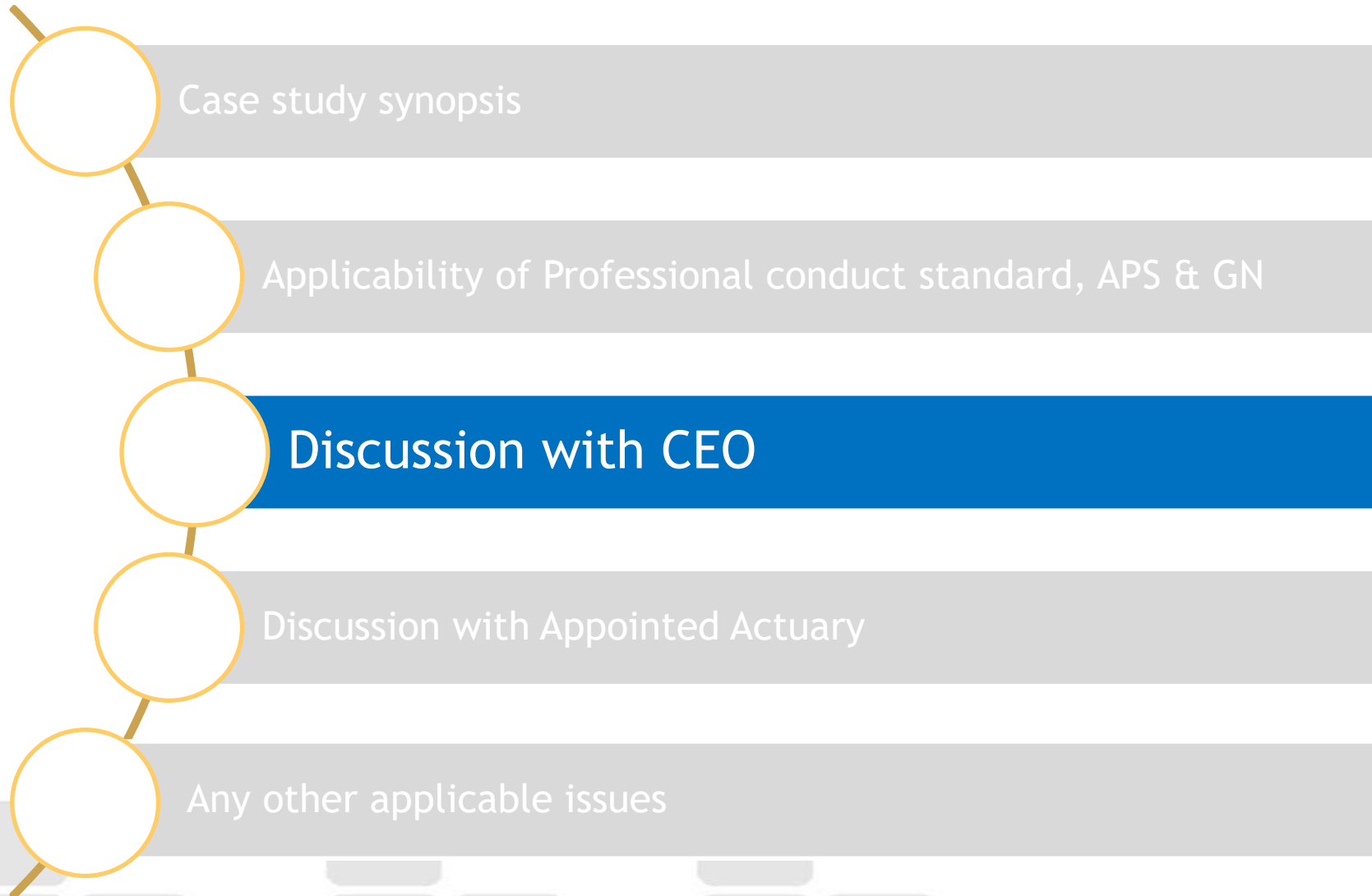
Reference

Key responsibilities include:

- Assessing financial soundness of relevant health insurance subclasses.
- Ensuring compliance with regulatory solvency and reserving requirements.
- Identifying emerging risks that could impact financial stability.
- Providing recommendations to the Board and regulators on necessary corrective actions.

By this Section 8.1, actuaries help insurers maintain financial discipline, comply with regulatory mandates, and safeguard policyholder interests.

Section 3



Discussion with CEO

Potential items to be discussed with CEO are:

- Explaining the key lines of Group business (such as Group IP, CI or PMI) which are seeing persistent increase in claim ratios and splitting claims analysis by:
 - each individual group contract (also old vs new group)
 - channel/distributor
 - industry to which group belongs
 - geographical location
 - Hospitals
 - Occupation
 - level of minimum take up rate
 - free cover limit
 - treatments/illnesses
 - salary range

Discussion with CEO...contd

Issues related to pricing:

- even though there was **increase in claims ratio** over the years but premium rates were not updated
- significant changes observed in the **composition of the group** including number of lives and profiles from last year
- it seems **minimum take up rate is decreasing** and company is facing anti-selection risk
- **free cover limit is set too high** and members are insured without initial underwriting
- contracts sold to many **new groups** (majority of which were small groups) last year with very less past claims history which have resulted in poor experience
- existing pricing model assumes a **flat rate for all participants** irrespective of the group size and price is dependent solely based on past claims history. This approach kept claim ratios below 100% till last year because majority of the groups were large

Discussion with CEO...contd



- For **Group PMI**, medical inflation assumption used is constant for all treatments and procedures which is not in line with the experience leading to lower expected claims
- For **Group IP**, expected claim duration is shorter than actual resulting in claims being paid for longer duration than expected
- For **Group CI**, it seems that advancement of technology had led to payment of claims which were not expected had policyholder not survived the waiting period. *(Assumption related to how many policyholder will survive waiting period is not in line with actual)*
- Feature of covering of all **pre-existing conditions** from day 1 (as marketing tactic) is not working well for the company as people claiming with prior medical conditions have been increasing.

Discussion with CEO...contd



- It seems there is a **need of a no claims discount or policy excess** as data shows large number of small claims, people submitting claims for even regular check-ups.
- It seems that **national cancer screening program** from government has led to earlier diagnosis and payment of cancer related claims (as part of Operational framework: Screening and management of common cancer)
- **Comparison of claim ratio with competitors** show that in general health insurers selling group business have witnessed increase in claim ratios over the years and shrunken margins
- Impact of COVID-19 pandemic on increasing claim ratios
 - **Long COVID:** long term effects of pandemic which has started to begin and led to increase in the health claims



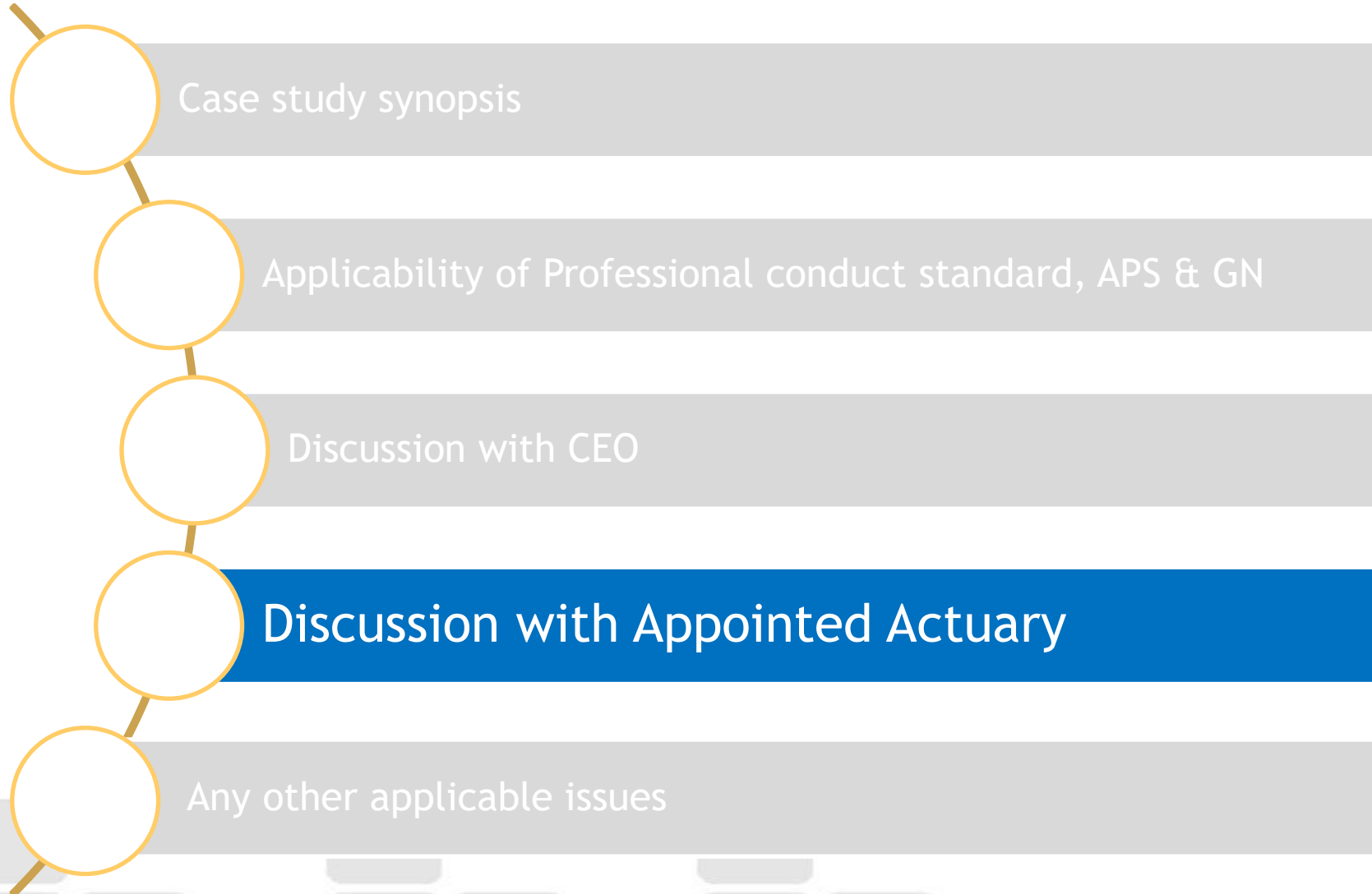
Discussion with CEO...contd



- Analysis of claims suggests a trend that large proportion of claims submitted last year were from people who were infected with COVID-19.
- Increase in PMI and IP claims from young population and the reasons of claim seems to indicate the risk of **moral hazard** where people become incautious because they are protected by insurance.
- New regulation require health insurers to offer at least one product without upper age limit (which earlier was 65). This has further fueled the increase in claims from age group greater than 65.



Section 4



Discussion with previous Appointed Actuary



Engaging with the previous Appointed Actuary can provide valuable insights and context.

- **Seek Insights on Historical Context:** Understand the rationale behind past pricing decisions and any previous strategies employed to manage claims experience. This can help you identify patterns or issues that may have been overlooked.
- **Discuss Current Challenges:** Share your findings regarding the current claims experience and the need for premium adjustments. Ask for their perspective on how to communicate this to the leadership team and any strategies they might recommend.
- **Collaborate on Solutions:** Explore potential solutions together. The previous Appointed Actuary may have insights into how to balance the need for premium increases with market competitiveness, or they may have experience with stakeholder management that could be beneficial.



Discussion with previous Appointed Actuary...contd



Detailed discussion points are listed below:

1. **Historical Claims Trends:** Request detailed information on historical claims trends and how they have evolved over time. Understanding past patterns can help identify whether the current deterioration is part of a longer-term trend or a recent anomaly.
2. **Pricing Strategies:** Discuss the pricing strategies that were previously employed. What factors were considered when setting premiums? Were there any successful strategies for managing claims that could be revisited or adapted?
3. **Market Positioning:** Explore how the company positioned itself in the market during their tenure. What competitive advantages or unique selling propositions were leveraged? How did they respond to competitive pressures while maintaining financial health?
4. **Regulatory Considerations:** Inquire about any regulatory challenges or considerations that may have influenced past pricing decisions. Understanding the regulatory landscape can help you navigate current constraints and opportunities.

Discussion with previous Appointed Actuary...contd



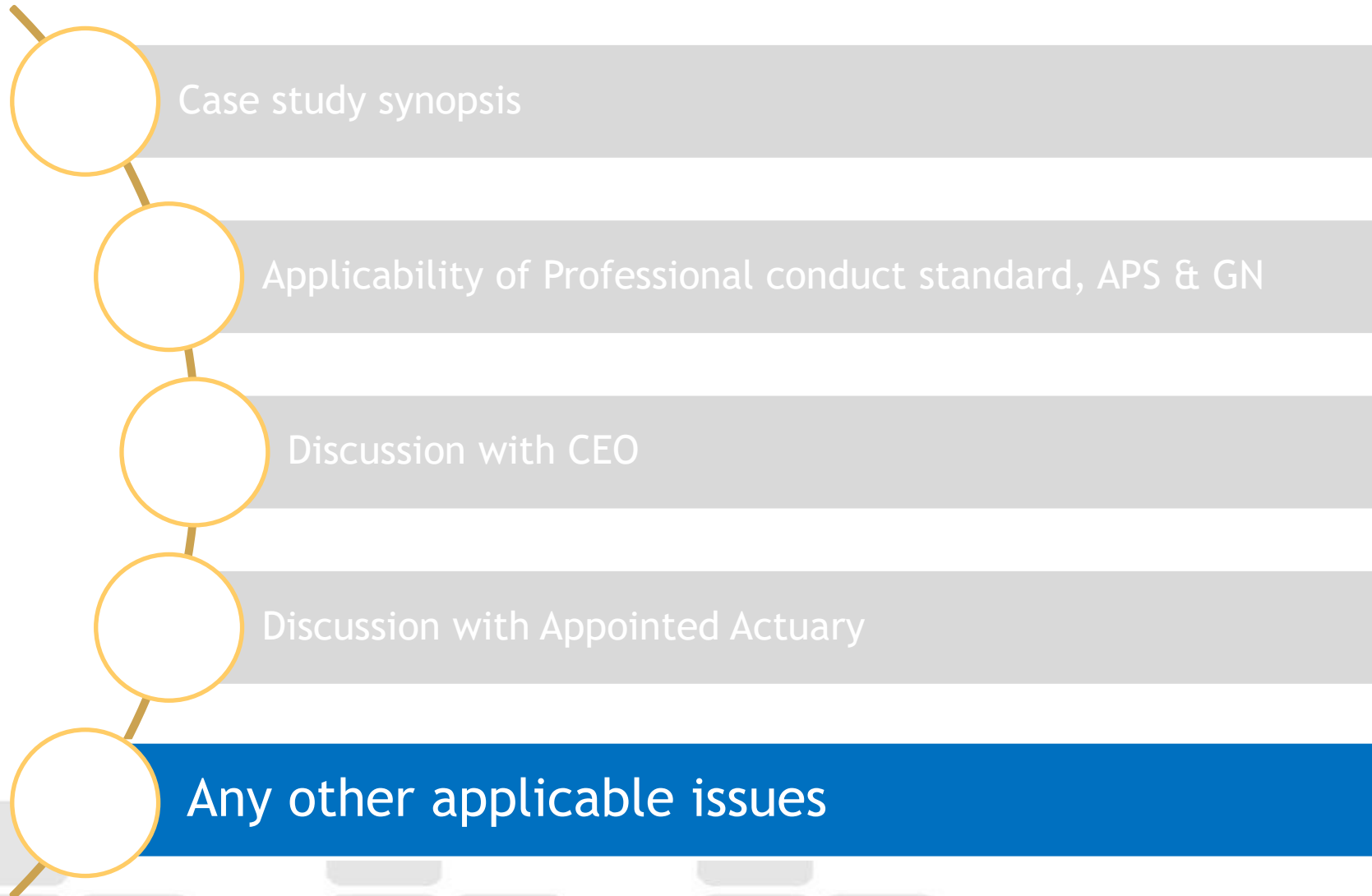
5. **Stakeholder Communication:** Discuss how they communicated with stakeholders (e.g., the board, management, and clients) regarding premium adjustments and claims experience. What strategies were effective in gaining buy-in for necessary changes?
6. **Risk Management Practices:** Ask about the risk management practices that were in place. Were there specific initiatives aimed at reducing claims or improving underwriting processes? Understanding these practices can inform your current approach.
7. **Claims Management and Cost Control:** Explore any claims management strategies that were implemented to control costs. Were there partnerships with healthcare providers or initiatives to promote preventive care that could be revisited?
8. **Lessons Learned:** Encourage the previous Appointed Actuary to share lessons learned from their experience, particularly regarding challenges faced and how they were addressed. This can provide valuable insights into potential pitfalls to avoid.

Discussion with previous Appointed Actuary...contd



9. **Collaboration with Other Departments:** Discuss how they collaborated with other departments, such as underwriting, marketing, and claims, to address issues related to claims experience and premium pricing. Understanding interdepartmental dynamics can help you foster collaboration moving forward.
10. **Future Outlook:** Seek their perspective on the future outlook for the health insurance market, particularly in light of current trends. What do they foresee as potential challenges or opportunities that the company should be aware of?
11. **Transition of Knowledge:** Discuss the transition of knowledge and any documentation or resources that could be helpful for you in your new role. This could include reports, analyses, or tools that were used to monitor claims experience and pricing.
12. **Networking and Industry Contacts:** Inquire if they have any industry contacts or networks that could be beneficial for you to engage with. Networking with other actuaries or industry professionals can provide additional insights and support.

Section 5



Any other issue applicable in your opinion and how to deal with the situation

Challenges in Managing loss ratios

Strategic Challenge	Issue	Solution
Adverse Selection	High-risk policyholders disproportionately increase claims experience.	Implement underwriting controls, risk-based pricing, and pre-screening mechanisms.
Price Sensitivity & Competition	Competitive market pressures limit pricing flexibility, leading to potential underpricing.	Develop differentiated products, use value-based pricing, and offer wellness incentives.
Moral Hazard	Policyholders may overutilize benefits, increasing claims costs.	Introduce copayments, deductibles, and managed care mechanisms to control overutilization.
Lack of Data-Driven Pricing	Failure to leverage predictive analytics leads to suboptimal premium setting.	Utilize machine learning models, historical trends, and big data analytics for pricing.
Solvency Risks	Persistently high loss ratios affect solvency and risk-based capital (RBC) requirements.	Regularly monitor capital adequacy, use stress testing, and optimize reinsurance arrangements.

Any other issue applicable in your opinion and how to deal with the situation...contd

Enhancing Claims Management & Fraud Prevention

Strategy	Implementation Approach
Network Optimization	• Negotiate discounts with hospitals & TPAs.
	• Establish Preferred Provider Networks (PPNs) to contract select healthcare providers at discounted rates.
Volume-Based Pricing	• Commit to steady patient volumes for discounted treatment costs.
	• Implement multi-year agreements with providers to ensure price stability.
Provider Incentives	• Reward hospitals for improved health outcomes rather than procedure volume.
	• Encourage cost-effective care delivery.
Managed Care Strategies	• Require pre-authorization for high-cost treatments.
	• Prevent unnecessary procedures and reduce overbilling from hospitals and clinics.

Any other issue applicable in your opinion and how to deal with the situation...contd



Enhancing Claims Management & Fraud Prevention

- AI-based fraud analytics
 - to detect abnormal billing, excessive claims and health trends
 - Analysis of claim frequency and claim severity
 - Identifying outliers
 - Implement suitable ML based models:
 - Supervised Learning (Predicting High-Risk Claims)
 - Logistic Regression (Likelihood of excessive claims)
 - Neural Networks (Deep Learning for complex patterns)
 - Unsupervised Learning (Anomaly Detection & Fraud Detection)
 - K-Means Clustering (Grouping claimants to detect outliers)
- Improve underwriting decisions

Any other issue applicable in your opinion and how to deal with the situation...contd



Negotiating with Management & Marketing Teams

- Highlighting financial risks of loss-making policies
- For Sales team to pitch for Corporate Wellness and Preventive Care programs
 - Annual health screenings to detect early disease symptoms
 - Regular mental health assessments to address workplace stress
 - Incentives for healthy behaviors
 - Personalized nutrition plans and lifestyle coaching
 - Remote monitoring of high-risk patients through wearable devices
 - AI-based symptom checkers to reduce unnecessary ER visits
 - Discounted gym memberships and rewards for fitness tracking

Any other issue applicable in your opinion and how to deal with the situation...contd



Redesigning of Products

- Introducing Copayments
 - Reduces overutilization of healthcare services and discourages unnecessary doctor visits
- Implementing Deductibles
 - Encourages responsible healthcare spending and helps reduce small, frequent claims
 - Family vs. Individual Deductibles
 - High-Deductible Health Plans (HDHPs)
- Plans designed with specific benefit tiers to balance affordability and coverage options
 - Bronze, Silver, Gold, Platinum Plans: Varying premium vs. out-of-pocket cost trade-offs

Conclusions & Recommendations

Key Insights	Recommended Actions
Price Freeze is Unsustainable	Due to rising loss ratios, maintaining current premium levels will impact profitability.
Cost Control & Claims Management	Implement cost-containment strategies, fraud prevention, and better underwriting controls.
Policy Restructuring	Adjust policy terms, introduce co-pays, and optimize provider contracts.
Engage with Management	Communicate financial risks and sustainability concerns to decision-makers.
Compliance	Ensure adherence to actuarial practice standards (APS) and solvency regulations.
Gradual Premium Adjustments	Introduce small, justified increases while using non-price strategies to retain business.

Question and Answers