

45th India Fellowship Seminar

Date: 18th and 19th December 2025

Life Insurance Technical Case Study: Geo-political Risks and Business Impact

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Agenda



- Case Study Overview
- Company Profile
- Geo-political Risks - Key Events, Global Drivers & India Spillovers
- Potential Business Impact - Regulatory Interventions / Changes
- Actuarial Assessments (*considering any professional aspects*)
- Mitigation & Management Steps
- Recommendations
- Conclusion - Building Resilience

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Case Study Overview: Background



You are the Chief Actuary of an Indian life insurance company.

During a quarterly Board meeting, one of the Board members raises a concern about the rising global instability – including shifting political alliances, economic sanctions, trade disruptions, wars, and conflicts – and their potential impact on the company's long-term business stability.

The Board has requested you to prepare a presentation covering the aspects given in the following slide.



Case Study Overview: Key Focus Areas

- Geo-political Risks & Business Impact
- Potential Business Impact (including arising from regulatory interventions / changes, if any)
- Actuarial Assessments (considering any professional aspects)
- Mitigation & Management Steps
- Recommendations
- Conclusion - Building Resilience

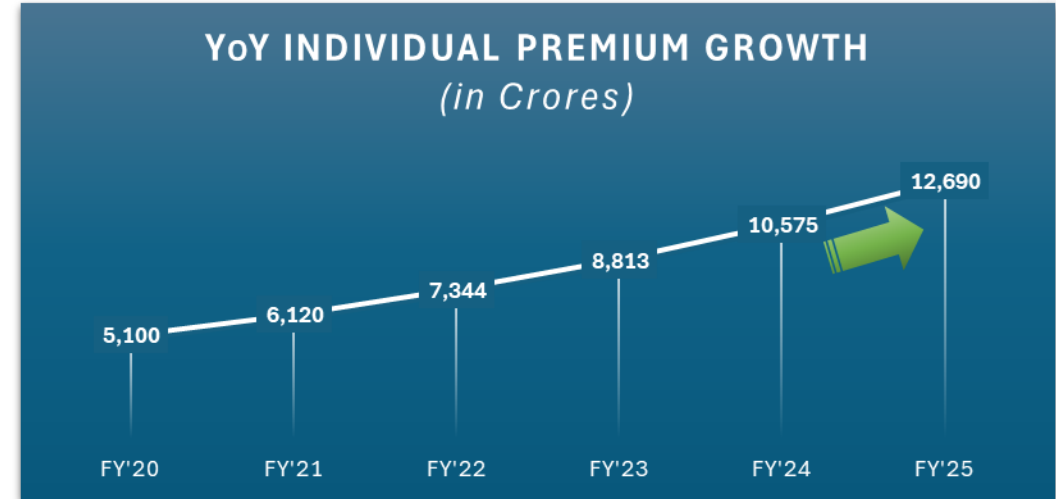
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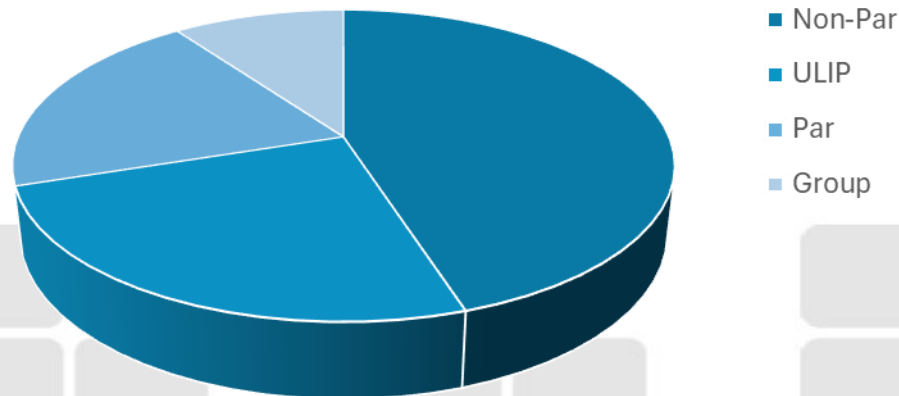
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Company Background: AMPS Life Insurance

- Incorporated in 2000, with over 25 years in Indian markets
- Among top 5 insurers in terms of premium volumes
- Diverse portfolio across product categories, customer segments & distribution channels



Business Mix - FY'25



- Major focus on Non-Par followed by UL, Par & Group
- Operational in GIFT City
- Diverse investment mix - Bonds (GSECs, SGSECs & Corporate), Equities, Derivatives etc.

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Geo-political Risks - Key Events

Russia-Ukraine War

- Russian military invaded Ukraine causing full-scale war
- Disruption of key trade routes & ports in Ukraine
- Global energy & agricultural supply chains affected

Russia Oil Sanctions

- Russia faced international sanctions restricting oil exports
- Reduced imports by Europe → exports redirected to Asia
- Disruption of global crude oil supply chain

US-China Trade Tensions

- US & China imposed reciprocal tariffs on key goods
- Disruption of trade flows between these two countries
- Global supply chain & sourcing patterns impacted

India-Pakistan Border Conflicts

- Escalations increase risk of cross-border clashes/wars
- Affects regional trade & investment confidence
- Possible disruption of infrastructure & regional economic activity

Geo-political Risks - Global Drivers



Geo-political risk drivers & their relevance to the Indian Life Insurers:

- Geo-political conflicts & sanctions
- Global trade & currency disruptions
- Shifts in global investment flows & risk aversion
- Geo-political cyber risks & data security threats
- Global ESG & climate related policy shifts
- Oil price volatility & global inflation

Geo-political Risks - India Spillovers

Domestic spillovers - Impact on the Indian Life Insurers:

- Volatility in domestic interest rate markets
- Equity market fluctuations & investor sentiments
- Corporate credit deterioration
- Macro-economic uncertainty & household savings pressure
- Reinsurance capacity & pricing challenges
- Operational & outsourcing vulnerabilities

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Potential Business Impact

New Business Volumes:

- New business volumes may be impacted:
 - Slower growth, high inflation & supply-chain shocks etc. may affect employment & household income in general
 - Reduced disposable income, changes in consumers' priority
- Impact on demand for savings life products
- Mismatch between expenses loaded & expenses accruing
- Reduced contribution to overheads / profitability
- Costlier life insurance products

Potential Business Impact

Impact on persistency:

- Loss if policy lapses when asset share is negative
- ALM mismatch / liquidity risks
- Reduced in-force volume
 - Mismatch between expenses loaded & expenses accruing
 - Increased per policy expense, leading to reduced contribution to overheads
- Impact on profitability

Potential Business Impact

Expenses:

- Expense may go up due to inflationary pressures
- Increased per-policy fixed expenses
- Strengthening of expense assumption for reserving - increased capital requirement
- Differential impact for existing & new business
- Impact on profitability

Potential Business Impact

Market Volatility:

- Volatile investment returns
- Decline in G-Sec rate
- Strengthening of investment return assumption for reserving - increased capital requirement
- Impact on bonus
- Impact on profitability

Potential Business Impact



Capital, Solvency & Profitability:

- Strengthening of bases (investment assumptions, lapses, expenses)
 - Increase in reserves
 - Increase in new business strain
 - Increase in cost of capital
- Solvency ratio:
 - Increase in Required Solvency Margin
 - Recognition of negative Fair Value Change Account (MTM losses on FRAs)
- Impact on Embedded Value & Value of New Business

Potential Business Impact



Regulatory Interventions / Changes:

- Close monitoring, e.g. if solvency ratio reaches to certain target
- Strengthening of capital requirements e.g. through global reserves or increase in RSM factors
- Restriction of investments in asset classes considered risky
- Changes to surrender value terms
- Changes in EOM limits / remuneration to distributors
- Restriction on increase in premium rates for some products
- Consideration of geo-political risks in RMC

Potential Business Impact

Others:

- Rationalization of taxes e.g. GST reduction - may impact differently for
 - existing / new business
 - short / long term
- Reinsurance:
 - Reduced access to cross-border reinsurers
 - Increased reinsurance premiums
- Cyber & data security threats - Digital Personal Data Protection (DPDP) norms

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Actuarial Assessments

Monitoring & realigning the assumptions

- Re-calibration of mortality rate for affected geographies
- Re-evaluation of lapse/surrender assumptions
- Update discount rate assumption based on market spreads reflective of geo-political risk
- Re-alignment of inflation & expense assumption

Asset Liability Management

- Credit spreads may widen for certain sovereign or corporate issuers
- Duration as well as cashflow mismatch
- Re-calculate mismatch reserve
- Liquidity risk

Actuarial Assessments

Reserving & liability valuation

- Additional risk adjustment for non-financial risk
- Increased margins for adverse deviation (MAD)
- Holding global reserve e.g. pandemic reserve, cost of guarantee reserve

Capital & Solvency Requirements

- Higher SCR (Solvency Capital Requirement) for market, credit, mortality & counter party default risks
- Increased concentration risk charges for asset in geo-politically sensitive regions
- Calculating the capital requirement under RBC regime

Actuarial Assessments

Sensitivity Testing

Assess resilience of various components during such severe geo-political scenarios

- Capital requirement
- Solvency ratio
- Embedded value etc.

Example:

- a) Mortality shock from conflict
- b) Market volatility: equity - 30%, spread +150bps

Reverse Stress Testing

Understand what severity of geo-political event would lead to breach of a particular indicator

Example:

Back calculate how much stress can be supported so that the internal solvency requirement doesn't gets breached

Actuarial Assessments

Some other areas to be focused on:

- Reinsurance strategy
- Risk appetite framework
- Assessing the geo-political impact on product design & pricing
- KRAs: claims ratio, persistency ratio
- Shift in product mix, due to geo-political events:
 - Protection products → higher demand, but riskier
 - Savings/annuities → change in demand due to market uncertainty
 - Universal life/investment-linked → more volatility

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Mitigation & Management Steps

- Shifting toward safer, more liquid assets in turbulent times
- Hedging interest rate & currency exposure
- Diversification of:
 - Product Mix
 - Reinsurance
 - Investments - cross border investments
- Re-calibrating assumptions more frequently
- Re-pricing products in case certain threshold is breached
- Introduce more flexible & investment linked products
- Definitions & exclusions can be made watertight
- Cyber security - mitigated through antivirus, multi-factor authentication, employee trainings

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Recommendations

1

Distinct ERM Risk Category

- Formal Board oversight through RMC
- Set thresholds for market volatility, capital strain & liquidity shocks
- Regular reporting

2

Strategic Capital Management

- Increase internal solvency requirement
- Incorporate geo-political stress scenarios in solvency assessment
- Perform reverse stress testing under extreme but plausible scenarios

Recommendations

3

Product Strategy

- Diversify product mix comprehensively
- Explicit pricing for inflation, reinvestment & longevity risks
- Recalibrate assumptions
- Tighten underwriting standards

4

Investment Strategy

- Enhance liquidity reserves in the short term
- Rebalance investment portfolio strategically
- Deploy hedging instruments for protection
- Regular ALM monitoring

Recommendations

5 — Proactive Regulatory & Policyholder Engagement

- Geo-political stress can trigger investment limits, solvency requirements & policyholder protection measures
- Anticipate regulatory interventions
- Clear policyholder communication

6 — Deepen Actuarial Involvement in Strategic Decision Making

- Geo-political risks are inherently long term, uncertain & scenario based
- Involvement in capital allocation, business planning, etc.
- Strengthen actuarial opinion & peer review process

Operational Resilience

Business Continuity

Robust BCP & disaster recovery protocols to be tested regularly

Vendor Risk

Comprehensive third-party & outsourcing partner assessments, including RI

Technology

Digital processes for customer servicing & advanced security infrastructure

Governance

Enhanced oversight frameworks, clear accountability structures

Risk Dashboard

Monitoring system with early warning indicators & scenario tracking

Risk Culture

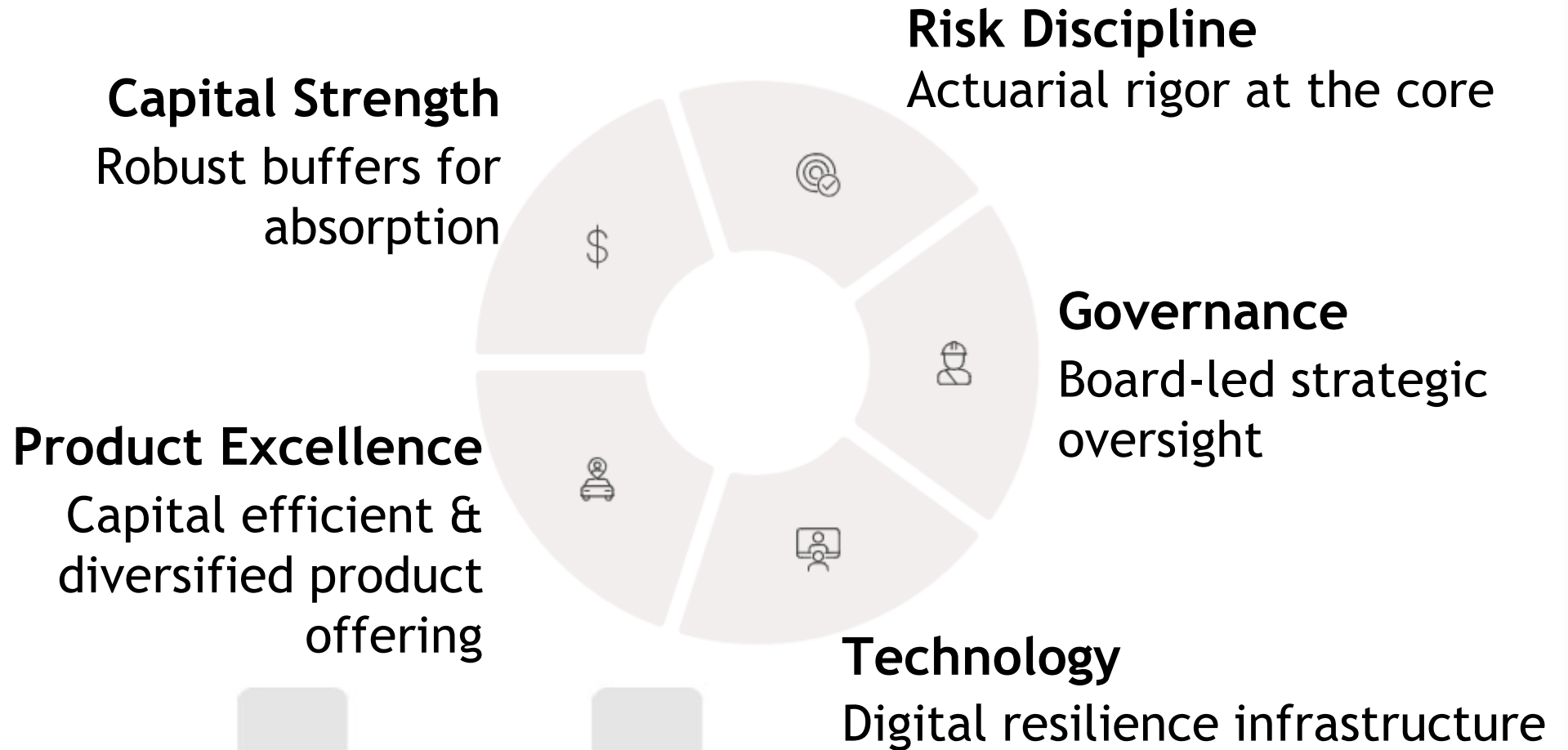
Enterprise-wide awareness & training

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Conclusion - Building Resilience

Geo-political instability is structural, not cyclical



Geo-political Risks and Business Impact

Q&A

Thank You!!!



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