From financial reporting to strategy

How digital transformation driven by IFRS and RBC can reshape the Indian insurance sector

November 2025

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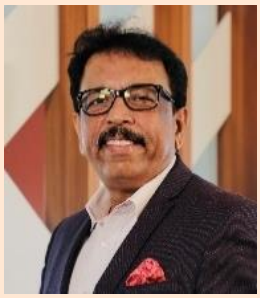
Foreword from PwC



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The Indian insurance industry stands at a pivotal juncture. The twin transitions—the adoption of IFRS 17 accounting standards and the proposed shift to a risk-based capital (RBC) framework—are poised to usher in a new era of financial transparency, robust risk management, and operational excellence. These reforms mark a decisive move toward globally harmonised financial reporting and prudential regulation.

Recognising the scale and complexity of this transformation, the Insurance Regulatory and Development Authority of India (IRDAI) has proactively constituted an expert committee to guide the industry through the IFRS 17 implementation journey. The initial gap assessments by all insurers are now complete and proforma submissions to evaluate the impact of the transition are underway in a phased manner. Cycle 1 submissions are expected by December 2025, followed by Cycle 2 in June 2026. The final implementation timeline will be announced post-assessment and industry consultation.

On the RBC front, Quantitative Impact Study (QIS) 1 has been conducted, and QIS 2 concluded on 15 October 2025. IRDAI is actively evaluating the findings and is expected to announce the next steps shortly.

These frameworks are not mere compliance checkboxes. They represent a paradigm shift for setting new benchmarks for transparency, comparability, and capital adequacy. More importantly, they are catalysts for building financial resilience, enhancing risk-based decision-making, and unlocking long-term value creation.

This paper provides a comprehensive overview of these transformative developments, delving into both adoption and post-adoption challenges and opportunities, perceived through a global lens and grounded in local experience. It underscores the imperative for a strategic financial transformation encompassing data architecture, actuarial modernisation, and advanced technology integration. Such a transformation is not only essential for compliance but also for delivering sharper insights and fostering innovation across the insurance value chain.

The impact of this shift will be felt across the entire insurance ecosystem as:

- Regulators will benefit from enhanced solvency oversight aligned with international best practices
- Insurers will be empowered to modernise finance and actuarial functions, investing in digital capabilities to drive efficiency and agility
- Actuaries will be called upon to evolve beyond traditional valuation roles, embracing new tools, models, and assume the role of strategic business partners
- Investors and policyholders will gain from improved transparency and comparability, fostering greater trust and confidence in the financial health of insurers.

Though navigating this complex landscape will demand foresight, collaboration, and resilience, the long-term rewards related to growth, competitiveness, and global credibility will make this transition worth the effort. We hope this report will serve as a valuable guide for all stakeholders who are committed to shaping a future-ready Indian insurance sector defined by resilience, transparency, and sustained value creation.

Foreword from ASSOCHAM

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Secretary General
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The global insurance industry is undergoing a profound transformation, driven by rapid technological changes and the growing need for sustainable practices. As countries face challenges related to climate, shifting demographics and the momentum of digital innovation, insurance has become an essential pillar for economic growth by closing protection gaps, strengthening resilience and supporting long-term economic stability.

Insurance stands out as a key factor in shaping the India's social and economic foundation as the country progresses towards achieving its vision of Viksit Bharat@2047. Once seen as a tool for financial safety, insurance now serves as a powerful force for building trust, stability and resilience. It gives individuals, families and businesses the confidence to grow while offering protection from uncertainties.

The vision of 'Insurance for All by 2030' expresses an aspiration higher than access. It is a vision for a system offering substantive protection, touching every citizen and business, irrespective of geography or size. However, translating this vision into reality needs collective determination, innovation and cooperation among policymakers, industry and technology partners. It also necessitates that the agenda move from merely expanding penetration to ensuring real protection that has a practical impact on individuals' lives.

Recent changes in government policies have improved the insurance sector. These updates have made regulations stronger, encouraged more involvement from foreign players and promoted the use of digital technologies. These efforts have given the industry fresh momentum to grow in the long run and work towards the goal of making insurance accessible, inclusive and affordable for everyone.

Capital efficiency, product innovation and robust regulation norms will be at the heart of this revolution. Similarly, the capabilities of technology and the rise of InsurTech are transforming the way insurance is designed, distributed and delivered. Digital ecosystems are closing gaps that existed for centuries, making protection more rapid, intelligent and inclusive. By combining data intelligence, automation and customer-focused design, technology is making insurance a real driver of economic growth and a cornerstone of financial inclusion.

Sustainability has become central to how the insurance industry shapes its future. The sector is now focusing on growth that goes hand-in-hand with climate resilience, responsible investing and fair access for all. By integrating ESG principles and climate-risk considerations into their core strategies, insurers are not only protecting assets but also contributing to a stronger, more balanced and environmentally aware economy.

In this context, ASSOCHAM, along with its Knowledge Partner PwC India, is delighted to release this knowledge paper on India's insurance sector. The report consolidates learnings on changing market trends, regulatory developments and innovation-driven opportunities that can guide the journey of the industry towards achieving its vision for 2030. It also provides insights into how the insurance industry can manage growth with sustainability and social equity.

We trust that the suggestions and conclusions presented in this report will stimulate informed conversation among stakeholders ranging from policymakers, regulators, insurers, investors, and consumers and help them to build a more robust, inclusive and competitive insurance ecosystem.

01

Message

Building an inclusive and resilient insurance ecosystem to achieve the government's vision of 'Insurance for All by 2047'.

The Insurance Regulatory and Development Authority of India (IRDAI) has launched an ambitious and visionary agenda 'Insurance for All by 2047'. The primary goal of this vision is not just to increase insurance coverage but also to create a stable, inclusive and innovation-led insurance ecosystem that not only aims to provide affordable and accessible solutions to every individual and business in India but also enables India to provide financial security to its citizens.

The goal requires concerted action on multiple fronts through cooperation between all parties involved—insurers, regulators and intermediaries. While IRDAI, on its part, has implemented regulatory reforms aimed at broadening market access, diversifying product lines, promoting financial inclusion, and improving ease of doing business, insurance companies can support the vision through various measures to increase reach among underserved segments, improve awareness, and cover poorly covered risks. Insurance companies' own financial resilience and capacity have a multiplier effect on such measures, and these can be achieved through better use of technology.

Among the regulatory initiatives of the past few years are the introduction of the Indian Accounting Standards (Ind AS) and risk-based capital (RBC). The former aims to improve ease of raising capital for Indian insurance companies by providing financial statements to potential investors in a globally understood format, while the latter aims to protect policyholders' interest and strengthen investor confidence by aligning regulatory capital requirements with explicit risk quantifications.

The insurance sector is progressing towards digital maturity, with technologies like data analytics, artificial intelligence (AI), and behavioural insights offering substantial chances to rethink processes and products and improve customer experience.

However, there remains significant scope for leveraging technology adoption to improve financial capacity and resilience, which has not yet been adequately explored by insurance companies. While technology and data infrastructure is being developed for Ind AS and RBC, at present, most insurance companies view these largely as supporting compliance. In this paper, we present a case of taking a view beyond reporting and compliance by utilising these new tools for better visibility into the company's day-to-day financial condition and potentially creating pricing mechanisms that align all stakeholders with the goal of improving the company's financial capacity.

Realising the vision for 2047 requires more than just regulatory changes. It calls for shared dedication and a cohesive sense of direction across multiple initiatives cutting across traditional borders between competencies. Through the adoption of technology, ethical practices, and a focus on customers, India's insurance sector can serve as a foundation for economic stability and social empowerment, guaranteeing that every individual and business feels secure, and optimistic about the future.

02

Introduction

The Indian insurance industry is undergoing a significant transformation driven by global factors such as technological advancement, the emergence and maturing of new risks, geopolitical conflicts, evolving customer expectations, and changing market conditions. Within the country, legal and regulatory reforms are also impacting the insurance industry. Among the many regulatory reforms undertaken by the Insurance Regulatory and Development Authority of India (IRDAI) over the past few years, two reforms could have a significant impact on the reported financial position of insurance companies:

- The transition to Indian Accounting Standards (Ind AS)/International Financial Reporting Standards (IFRS)
- The move to risk-based capital (RBC) from the present factor-based solvency.

These changes are currently being field-tested by IRDAI. While most insurance companies have seen some versions of their financial results under Ind AS/RBC, the longer-term impacts of these changes are yet to be determined.

These regulatory changes necessitate a transformation of financial processes and system architectures. RBC and IFRS require the financial statements to reflect a much more detailed understanding of an insurance company's business than was required previously. This information can be used for managing the company's day-to-day activities. However, this requires a comprehensive re-look at KPIs, management systems, and internal reporting processes.

This paper looks at the impact of IFRS and RBC on the Indian insurance sector and covers the following:

- Introduction to Ind AS and RBC and their effect on the financial statements of insurance companies, their challenges and advantages.
- The role of financial transformation in addressing the challenges of Ind AS and RBC
- An illustrative use case of the role of technology in financial management beyond RBC/IFRS compliance, using the example of a smart commission structure.

03

IFRS 17—aligning Indian financial statements with global standards

The International Financial Reporting Standards (IFRS) are global accounting standards that aim to provide consistent accounting practices across geographies and industries, replacing different local accounting practices. The Indian Accounting Standards (Ind AS) published by the Ministry of Corporate Affairs are the Indian version of IFRS. While most industries have moved to Ind AS, for Indian insurance companies, a go-live date has not been announced by IRDAI. Instead, Indian insurance companies continue to draw up financial statements in accordance with IRDAI regulations, following the Indian Generally Accepted Accounting Practices (Indian GAAP) framework.

IFRS 17/Ind AS 117 is the standard for insurance contracts. This standard fundamentally overhauls insurance accounting by changing how revenue, profits and liabilities are measured, recognised and disclosed. Being a principle-based framework, the standard creates a universal language for insurance accounting and enables comparability of the financial performance of different insurance players.

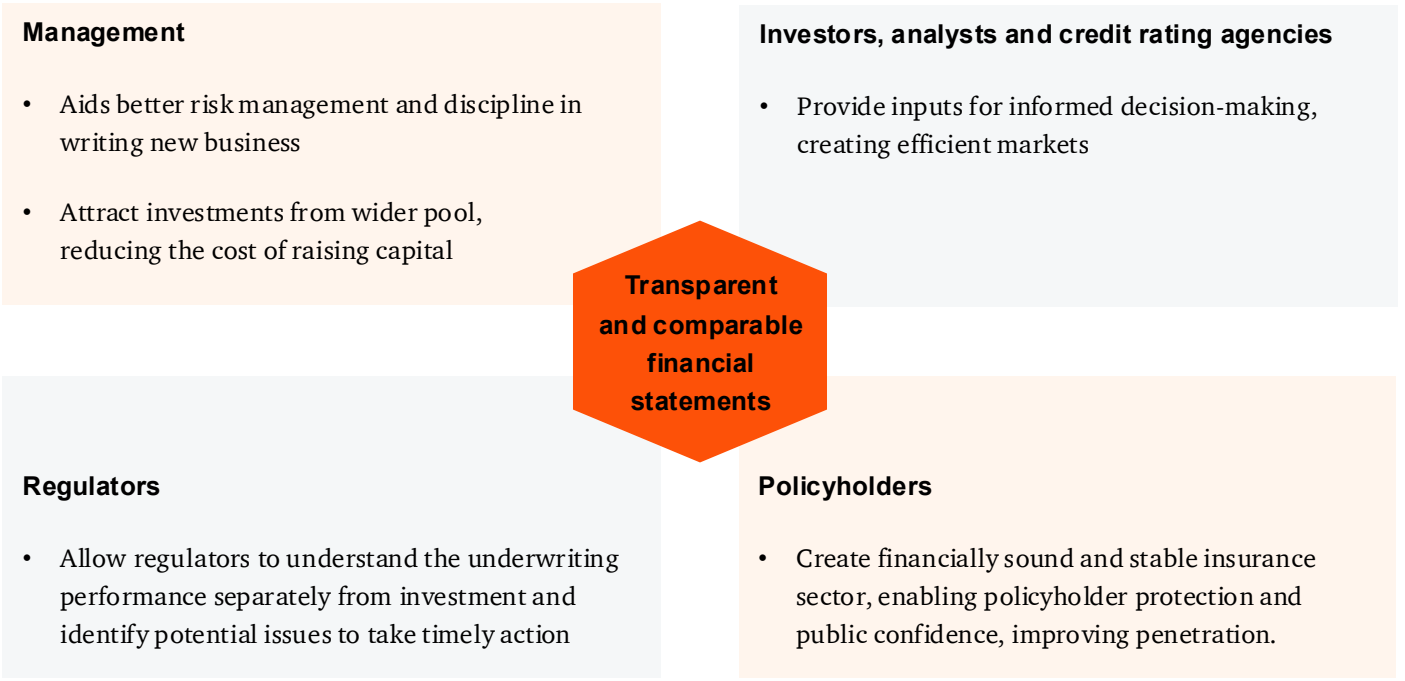
Although Ind AS 117 brings in several major changes, including the treatment of investments through IFRS 9/Ind AS 109 and leases through IFRS 16/Ind AS 116, this paper focuses on insurance contract accounting under IFRS 17/Ind AS 117.

Changes under IFRS 17/Ind AS 117

- **Level of reporting:** The need to segregate policies based on profitability and year of issue adds to the increased level of granularity of reporting.
- **Presentation:** The segregation of investment and insurance service results on the income statement with reinsurance results presented separately from gross business, improves transparency. Additionally financial statements are also accompanied with more detailed and granular level disclosures explaining the movements during the period.
- **Revenue recognition:** Instead of recognising premium as a revenue upfront, the standard requires insurers to recognise profits as services are delivered. There is a need to recognise losses on onerous contracts upfront.

What does the shift to Ind AS 117 means for the stakeholders?

Figure 1: An overview of the impact of Ind AS 117 on various stakeholders



Key challenges and learnings

Global context

Globally IFRS17 was effective from 1 January 2023. Over time, insurance companies, implementation partners, and regulators have learned several key lessons, given the complex nature of the standards, which calls for a major overhaul of systems, processes and business strategy.

- **The importance of early planning:** Insurers that started implementation early were better positioned to navigate the complexities of the standard, and plan resources and budget efficiently as deadlines approached.
- **Need for cross-functional collaboration:** By breaking down organisational silos between actuarial, finance and IT, teams should collaborate and develop a shared approach towards understanding and interpreting the revised financial indicators.
- **Need for technological transformation:** As the standard requires more granular and high-quality data pulled from various source systems, a centralised data warehouse is crucial for managing the volume and ensuring consistency. Further, the added complexity makes investment in automation and upgraded actuarial tools inevitable to bring efficiencies in the processes.
- **Proactive engagement with auditors:** Factoring a significant amount of time for early engagement with auditors and audit processes for the first set of financial statements is crucial to address any queries related to policy choices and transition numbers.

Some insurers are facing operational and technical challenges in fully adapting to IFRS 17's reporting requirements primarily due to:

- **Insufficient data:** Availability of granular data is a challenge. Some insurers are still grappling with the complexity of preparing standard compliant information.
- **Operational challenges:** Time taken due to the complexity of the calculations and preparation of more detailed reporting requirements is a roadblock in the timely preparation of the financials.
- **Manual processes:** Majority of the insurers are still making various manual cashflow adjustments outside the model.
- **Key-person dependency:** Finance and actuarial functions have higher involvement in implementation. Since IFRS 17 implementation competes for limited finance and actuarial bandwidth with business-as-usual and other initiatives, creating risks for timely implementation.

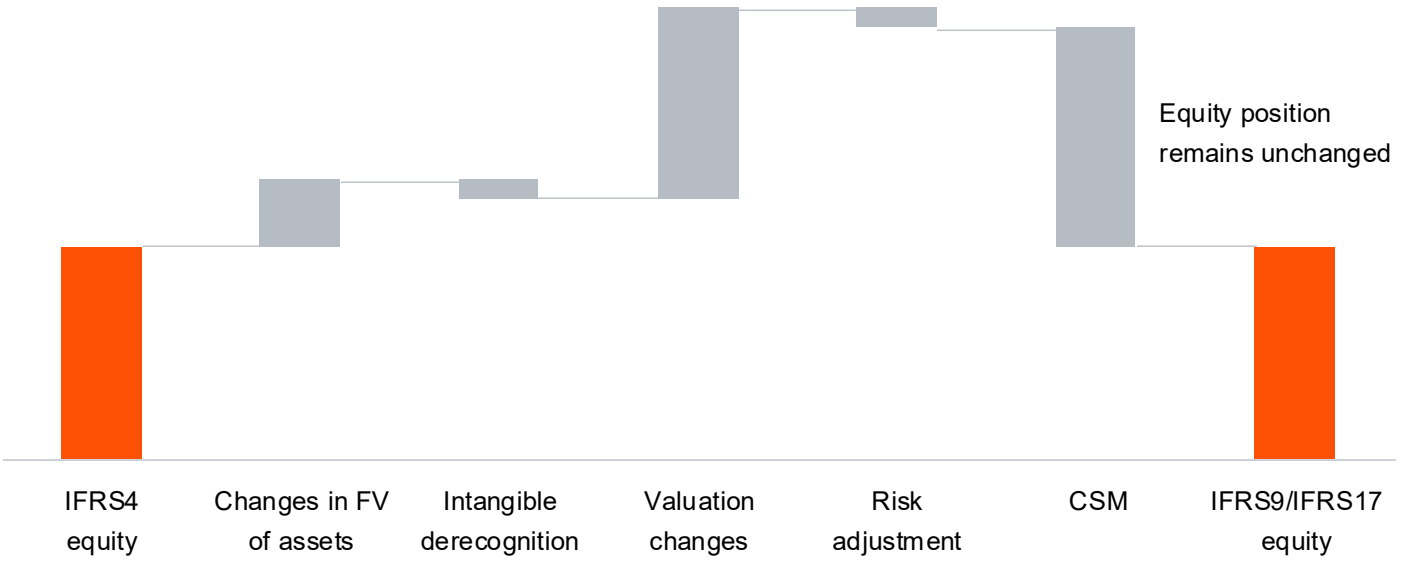
Impact of IFRS17 on reporting

The following section discusses some of the transitional impact of IFRS17 on first-time adoption across Life and GI markets:

Shareholders' equity: While the transition to IFRS 17 impacts insurance companies' equity, it is hard to assess the size of the impact as it depends on various factors such as size/age, organic/acquired contracts, transition method, calibration of fair value (where applied) and the size of IFRS 4 prudence margins. While some insurers recognised the transitional impacts in contractual service margin (CSM) and, therefore, reported very little movement in equity, others reported significant equity increases by recognising the impact directly in equity instead of CSM.

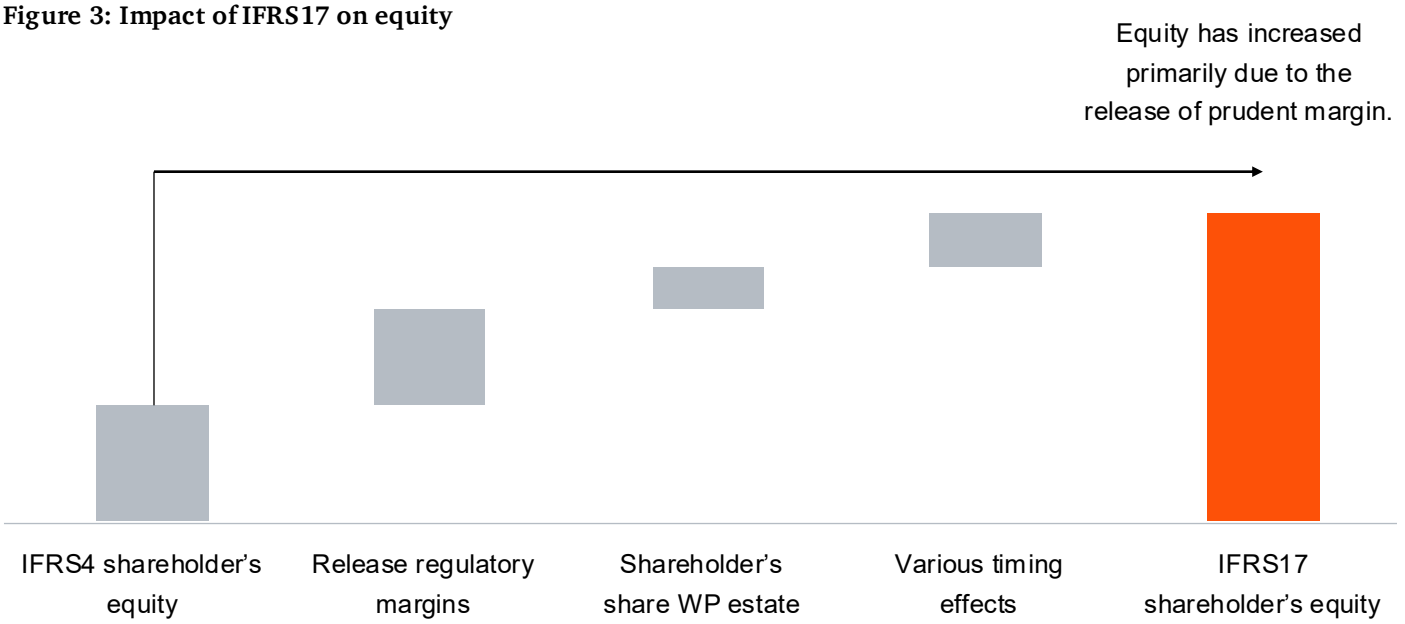
Figures 2 and 3 show the impact of transitioning to IFRS on insurance companies' equity.

Figure 2: Impact of IFRS17 on equity



Source: PwC analysis

Figure 3: Impact of IFRS17 on equity



Source: PwC analysis

With-profit considerations on transition: Majority of the insurers recognised a portion representing the expected future shareholder transfers within with-profits estate, in equity at the time of transition. This was included as part of undistributed surplus liability under IFRS4. Further to this, there are also differences identified in the definition of underlying items between open and closed-with-profits funds and how mutualisation is allowed for.

Impact of transition on P&L: The impact of transition to IFRS17 between insurers is not certain as there can be recycling of past profits or loss of future profits with balance taken to equity on transition which can have an impact on future P&L. Further, day one losses on onerous contracts are immediately booked, impacting transitional P&L. Additionally, since IFRS17 is measured on market consistent basis, there can also be a possibility of increased volatility in income statements due to market movements unless the financial effects are routed through other comprehensive income (OCI).

Figure 4 depicts the impact on IFRS17 profits of organisations which opt for limited use of OCI which increases the volatility of the income statement. This is reflected in the additional loss caused by the difference in short-term fluctuations captured between IFRS4/17.

Figure 4: Impact on pre-tax income IFRS4 vs IFRS17

Source: PwC analysis

Since European insurance companies largely rely on the Solvency II Economic Balance Sheet to manage business, majority of them indicated that IFRS17 is expected to create minimal impact on the economics of the business such as strategy, capital generation, regulatory capital position or dividend policy at the time of transition. Cumulative effect of new business added to CSM supports growth in insurance profit over time with the CSM release driving IFRS17 insurance adjusted operating profit. For insurers, where majority of the business is modelled under variable fee approach (VFA), which is a mandatory model for participating and unit-linked business, operating results are expected to be smoothened over time through CSM's release with negligible impact on investment results.

Causes of variations in IFRS 17's results among peer companies

Despite full disclosures that comply with IFRS17 requirements, there still exists an element of subjectivity in the approaches, calibration techniques and in the level of granularity adopted by firms, making their financial statements non-comparable with peers.

Some of the reasons for variability and reduced comparibility between financial statements are given in Table 1.

Table 1: Disclosure items and variability drivers between firms

Disclosures	Illustrative areas
Notes to the disclosures	Analysis of movement explaining the opening to closing liability reconciliations has variability in the level of details provided.
Transition approach	Companies that adopted fair value approach (FVA) on transition provided limited information on the assumptions used for the calculations.
Risk adjustment and sensitivities	There is variability in the confidence-level of risk adjustments calibration and the magnitude of each stress produced by insurers. Since its impact is not expected to be linear, it is difficult to conduct a direct comparison.

Key KPI's

The new standards will fundamentally shift the timing of profits recognised during the period but not the actual profits earned, impacting key KPI's that are used to analyse insurers' performance by investors and analysts. Based on our research, following is the snapshot of some of the old KPI's that may continue to exist with emerging new KPI's post transition.

Figure 5: Key KPIs

	This represents stock of future profit that will be released in IFRS17, which is essentially release of CSM and RA. The usefulness of this metric is restricted by variability that may exist in areas where judgement is required, such as coverage units, OCI etc.,
Adjusted operating profit	This continues to be a key alternative performance indicator for life insurers even after adopting IFRS17, albeit with new set of adjustments spanning from changes in CSM release to adjusting mismatches due to reinsurance and long-term investment performance.
Adjusted shareholders' equity	This metric provides better comparability by removing any differences in the transition equity position due to different transition approaches or calibrations selected. This is generally defined as IFRS Shareholder Equity (Net of taxes) + Net CSM (Net of taxes).
Combined ratio	This is an old KPI that continues to be disclosed by non-life firms, which is calculated as the sum of the loss ratio and the expense ratio. Some insurers have replaced this with a new KPI called net insurance margin.
Gross written premium	This is a preferred revenue KPI by GI insurers to monitor the growth of business and hence continue to report this in IFRS17 disclosures, even if its no-longer part of the IFRS17 income statement.

Insurance Revenue	This is identified as a new KPI post transition to IFRS17, due to its availability on the income statements. However, for the business measured under general model, since this includes operating variance in the cashflows which needs to be reconciled, it remains open if this continues to be a key KPI in the long run.
New Business Value	This metric in its new form, which is based on IFRS17 CSM (adjusted or unadjusted) post transition, continues to be a key KPI useful to both growth focused companies and investors.

Source: https://www.pwc.co.uk/financial-services/assets/pdf/ifrs-17-fy23-uk-reporting-analysis-april-2024.pdf

IFRS17 and India

The Ministry of Corporate Affairs (MCA) had notified the implementation of Ind AS 117 but the final mandate for a phased implementation is still under development by IRDAI. Ind AS 117 implementation is time-consuming which can significantly impact systems, processes and people. Therefore, IRDAI is currently facilitating various initiatives, from setting up an expert committee to engaging with industry players, to facilitate the smooth implementation of Ind AS 117.

As a first step, insurers were required to perform gap assessments related to data, systems and resources to understand the implementation challenges and submit a report to IRDAI. Gap assessment is completed for all insurers with average time taken by them being 4–6 months for completion. As a next step in the implementation journey, IRDAI has issued a letter dated 10 January 2025 to the insurers where the submission dates of proforma Ind AS financials based on a phase-wise schedule are provided.

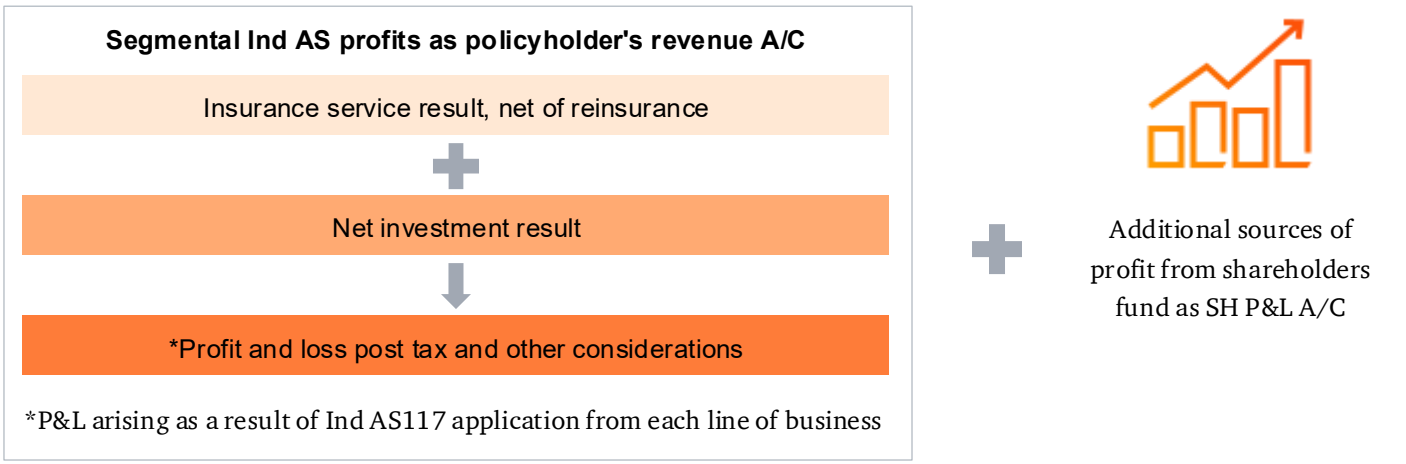
- Cycle 1 submissions for (FY23–24) for all insurers will end by December 2025.
- Cycle 2 submissions for (FY24–25) for all insurers will end by June 2026.[1]

Proforma financial statements not only facilitate the impact assessment of IndAS117 vs IGAAP (the current reporting framework) on financial statements but also help in understanding the financial performance and policy choices that have been adopted by different insurers, which can provide insights into issuing guidance at a later stage.

IRDAI has also provided the proforma reporting formats along with its letter. One of the key deviations identified in the format is the requirement to segregate results between separate policyholder and shareholder columns. Even though the line items presented in the statement of profit and loss are as per the internationally published IFRS17 statements, this deviation is created to enable proforma financial statements to comply with the requirements of both Ind AS and Insurance Act 1938.

The policyholder and shareholder columns represent profit or loss from each fund within Ind AS framework. To cater to the submission requirements, proforma can be interpreted/populated as below.

Figure 6: Policyholders' and shareholders' statements in proforma P&L



Source: PwC analysis

1. PwC analysis based on IRDAI's circular on 'Submission of Ind AS compliant porforma financial statements' dated 10 January 2025

Industry challenges

Some of the challenges that organisations may encounter during the implementation of IFRS 17/Ind AS 117are:

- **Group vs local reporting:** Majority of the players in Indian insurance market are joint ventures formed through partnerships between Indian entities and foreign insurance groups. As a result, many head/group office of the insurers who decide on the IFRS17 requirements for group IFRS reporting are not based in India and are not aware of the local reporting nuances. Decisions related to transition approach or policy choices for group reporting create a dependency on local expertise for implementation. One such challenge which insurers might face is the need for cohorting based on calendar year (CY) for group reporting vs local fiscal year (FY) for local reporting. Choosing between CY or FY for local implementation has its own advantages and disadvantages.

Table 2: Options for cohort creation

Ways of creating cohorts	Pros	Cons
Keeping local reporting consistent with group reporting using CY basis for cohorting	Reduces operational and reconciliation burden.	Results in open cohorts for local reporting, creating volatility during year end reporting.
Creating cohorting for local reporting based on local FY definition	Makes it easy to interpret the results reducing volatility on year-end balance sheet.	• Group systems will become unconfigurable for local requirement, calling for additional investment in new systems. • Increases operational and reconciliation burden between the two reports.
Create quarterly cohorts	Can easily be aggregated at CY or FY level for group and local reporting.	• Requires more granular record-keeping at the local level. • May not be straightforward to configure group systems to support quarterly cohorting.

Source: PwC analysis

- **Treatment of undistributed surplus, mutualisation and the need for cohorting in participating (par) business:** Participating products enable policyholders and shareholders to share surplus arising out of the insurance and investment activities specific to participating funds. The business is managed and governed by local regulatory rules where profits are shared between policyholders and shareholders. Additionally, the par-fund is also governed by company's bonus philosophy where certain surplus and deficits are not charged directly to the underlying items but to the undistributed surplus. But undistributed surplus, which are typically funds for future appropriation (FFA), does not exist on Ind AS 117 balance sheet. This presents the question about how the opening FFA and future FFA will be treated upon transition to Ind AS 117. Also, since par-funds are essentially profit-sharing funds, with high degree of mutualisation, similar to contracts in Europe, they will require calculation of change in entities' share (CES) at a fund level. Therefore, creation of cohorts in participating line of business and using drivers to allocate CES calculated at a fund level to different cohorts would not only add to operational complexity, but also have limited value add since such allocation drivers would only be a proxy, as the par fund is not just reflective of current cohorts but also of future unwritten cohorts. Industry consensus on these aspects is currently evolving and will need to be addressed before the implementation of the regulations.

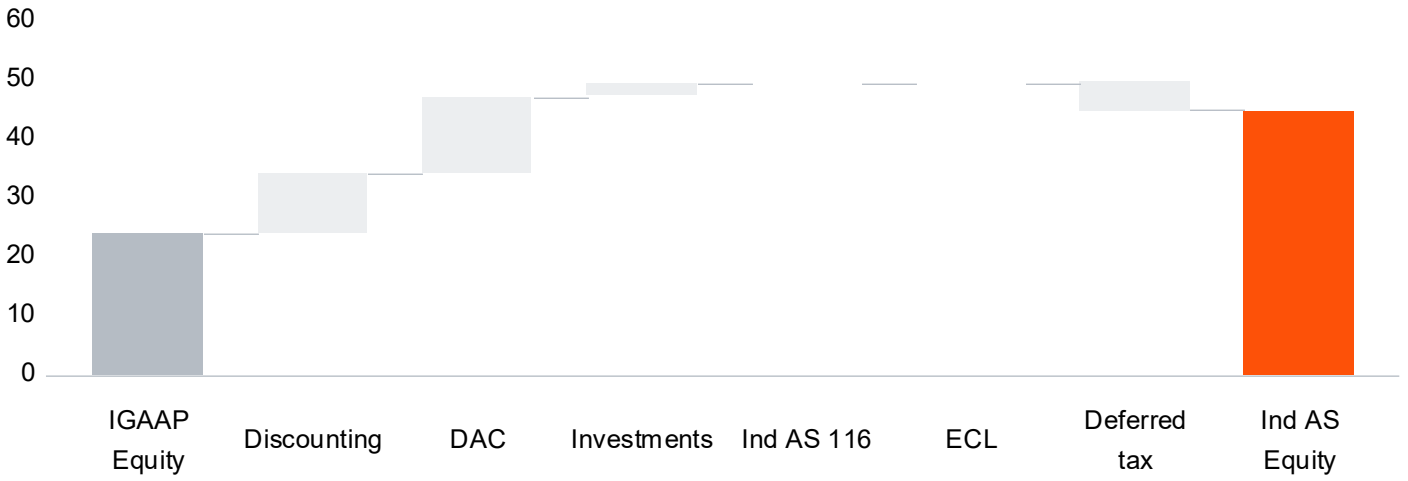
- **Data and systems:** Actuarial and finance teams have traditionally worked independently, and the output is collated for reporting. Under IFRS 17 (Ind AS 117), alignment around one source of truth, granular data, and clear audit trails is advisable. The principles point to a common data model with an insurance sub-ledger to connect actuarial engines and the general ledger. This will require a significant amount of restructuring and automation within the reporting and valuation processes.

- Ind AS 117 expertise is relatively scarce in the market. Various functions are seeking to integrate core actuarial skills as finance departments are hiring actuaries or actuaries are assuming the role of the CFO in many organisations. Auditors are expected to collaborate with or hire actuaries, as the proforma requires a limited review by both accountants and actuaries.

- Under Ind AS 117/IFRS 17, a contract is classified as an insurance contract if it transfers significant insurance risk by requiring the issuer to compensate the policyholder for a specified uncertain event that adversely affects that policyholder. Large public programmes such as the crop insurance scheme Pradhan Mantri Fasal Bima Yojana (PMFBY) insure farmers against adverse climate conditions but settle claims on an area-yield basis, without farm-level loss verification, as an operational simplification. Where payouts are determined by an index not specific to the policyholder, it can be argued that such contracts should be scoped out of Ind AS 117/IFRS 17 but instead fall under Ind AS 109 as weather/index derivatives.

Figure 7 presents an illustrative example demonstrating how the adoption of Ind AS could impact general insurance companies in India.

Figure 7: Impact of Ind AS transition on equity



Source: PwC analysis

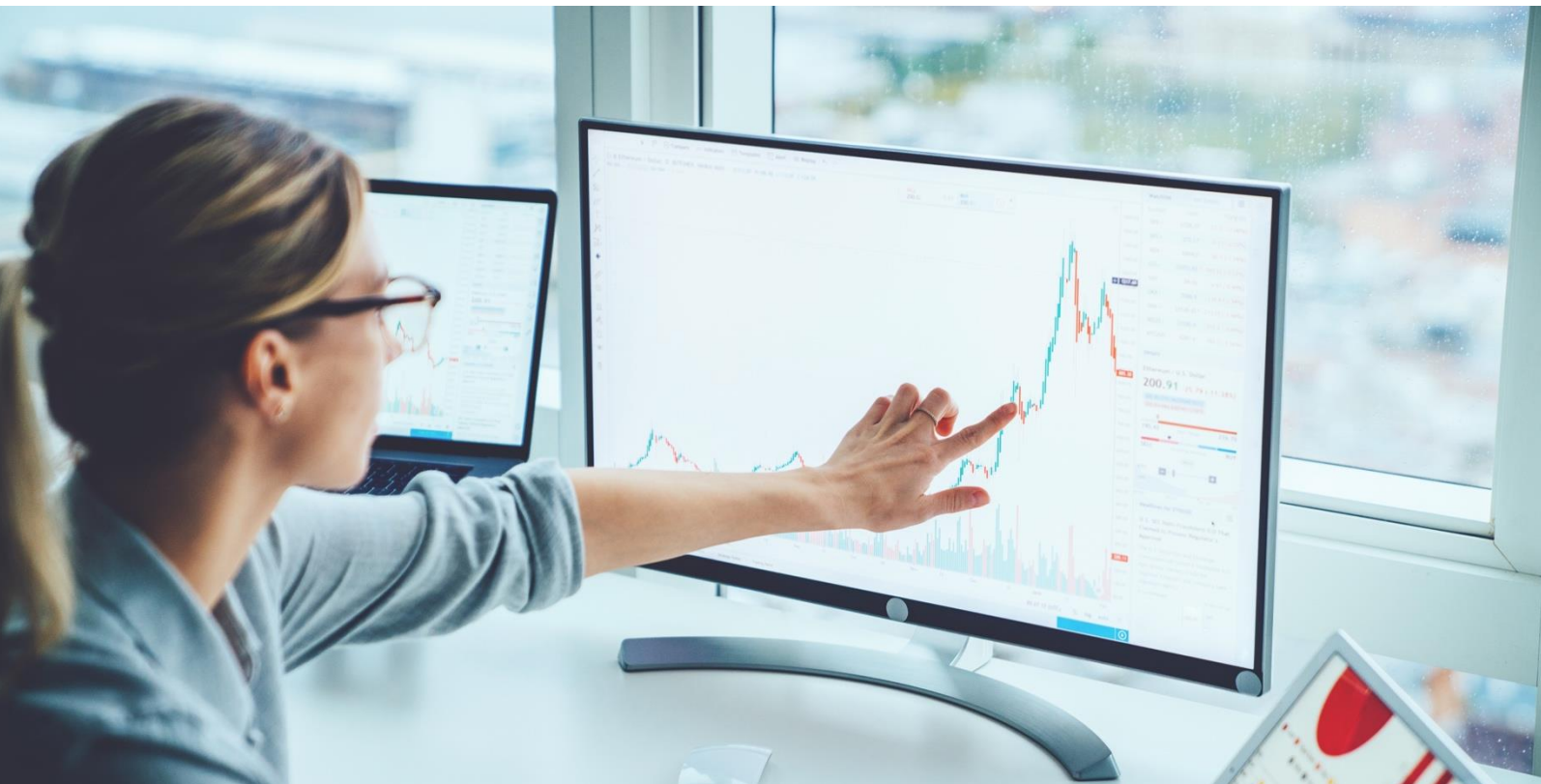
04

Risk-based capital: Quantifying resilience

A solvency framework determines how much capital an insurance company needs to set aside to support its business. It is a regulatory requirement in most jurisdictions and depends on the scale and complexity of the insurance company's business. RBC is a group of solvency frameworks where the capital requirements are explicitly modelled based on an insurance company's exposure to various risks such as insurance risk, market risk and counterparty default risk. Unlike IFRS or the banking sector's Basel norms, this is not a globally aligned standard; instead, each geography's insurance regulator creates its own RBC standards.

Towards this objective, IRDAI is designing an Indian Risk Based Capital framework. To field test this framework, the first quantitative impact study (QIS1) in August 2023. Based on the projected capital positions and backing calculations received from the Indian insurance companies, a two-year exercise was conducted to calibrate the capital charges to better reflect the risks Indian insurance companies are exposed to. This exercise concluded with the launch of QIS2 in August 2025. It remains to be seen whether the regulator will launch further QISes or roll out the RBC framework based on the results of QIS2. In the European Union, Solvency II was rolled out after 5 QISes; IRDAI, however, can draw on learnings from Solvency II and RBC implementation in other jurisdictions.

Future revisions may be necessitated to maintain consistency with international developments. The International Association of Insurance Supervisors (IAIS) adopted a global Insurance Capital Standard in December 2024. While currently this is aimed only at global supervision of Internationally Active Insurance Groups (IAIGs), there remains the possibility of this framework turning into a Basel-equivalent for insurance.



Changes under RBC

The current framework

The current Indian solvency regulation is adapted from European Solvency I, which was introduced in 1979. The current framework relies on high-level implicit proxies for companies' risk exposures to determine capital requirements. It is largely formula-based and does not consider the detailed risk exposure of individual insurance companies.

Under the current regulations, the derivation of capital requirements (i.e. required solvency margin) differs between life and non-life insurance.

For life, there are two factors which are specified for each line of business. One factor is applied to mathematical reserves and serves as a proxy for the market risk, while the other is applied to sum at risk and serves as a proxy for the insurance risk.

Further, only limited credit for reinsurance is available under both the life and the non-life frameworks. This serves as a proxy for credit risk and may also reflect a regulatory objective to discourage over-dependence on reinsurance.

Asset-related risks are not directly considered, which could be due to the relatively tight controls on insurance companies' investment strategies placed by the Insurance Act and IRDAI's investment regulations.

The upcoming Indian RBC framework

Unlike the current Solvency I-inspired framework, the RBC framework aims to explicitly quantify each risk which an insurance company is exposed to, giving due credit for mitigation (including reinsurance) and diversification.

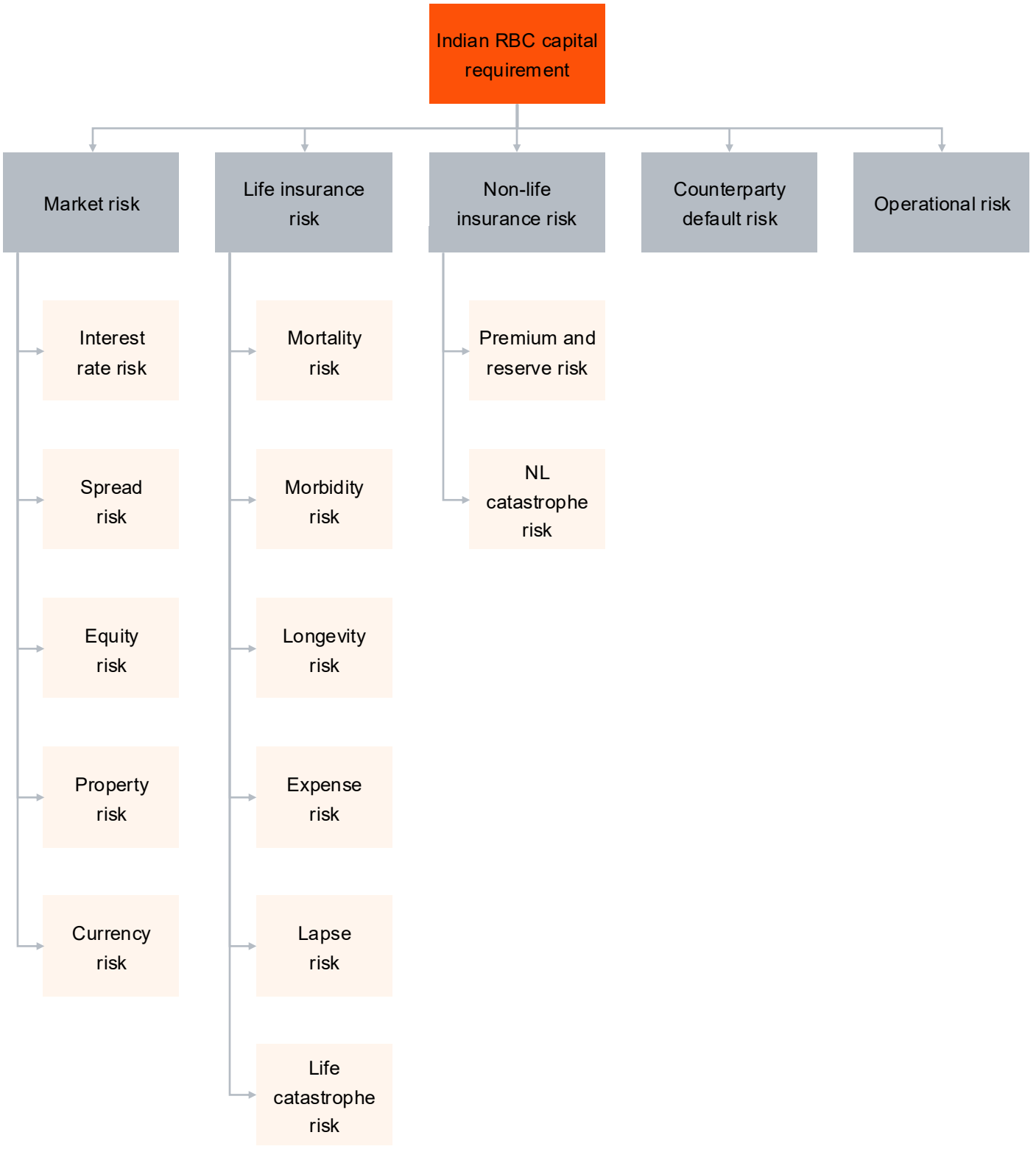
The capital charges are calibrated according to the actual characteristics of the associated risk. For instance:

- Insurance capital charges track the inherent riskiness (volatility) of the line of business.
- Market capital charges track the riskiness of the asset classes invested in and (for debt instruments) the credit rating of the issuer.
- Counterparty default capital charges track the credit rating of the counterparty.

The capital requirements are determined by drawing up an economic balance sheet (EBS) and applying stresses (capital charges) to the assets and the liabilities. Like IFRS, EBS measures assets at fair value and liabilities at discounted value. While applying the stresses, the insurance company quantifies and factors in the effect of any mitigations, and only the impact on the net position (assets minus liabilities) is considered.

For instance, interest rate changes will impact both the market value of debt assets and the discounted value of liabilities. Thus, companies which mitigate interest rate risk mitigation through stringent asset liability management (ALM) will see a lower net impact and, therefore, a lower capital requirement.

Figure 8: Risk classification under IRDAI QIS 2



Source: PwC analysis

Under Indian RBC, the capital charges are prescribed by the regulator based on an industry-level loss distribution.

This is called a standard formula approach and is prevalent in Asia and other markets. However, in the UK, the EU and several states in the US, insurance companies are permitted to use internal capital models to determine their regulatory capital requirements. Insurance companies are responsible for calibrating these internal models based on statistical models of their business. Apart from requiring detailed, accurate, and accessible data, this also requires sizeable teams with deep technical understanding to calibrate, operate, and validate the model. At present, most Indian companies do not have technical expertise at a scale comparable to companies in jurisdictions which permit internal capital models. However, this is a promising area since internal capital models reflect the company's own loss distributions better than industry averages would.

Why is RBC needed?

RBC frameworks represent global best practice for assessing insurance companies' solvency. The European Union moved to Solvency II in 2016. Other Asian jurisdictions have also moved to RBC with Hong Kong being the latest to adopt the framework in 2024. India is yet to adopt RBC and remains the last major Asian geography with a factor-based solvency approach.

RBC makes enterprise risks explicit and visible to all stakeholders such as insurance companies' managements, boards, investors, and regulators/supervisors. Stakeholders can see how much risk a company absorbs from its debt investments, its equity investments, insurance business across different classes, reinsurance cessions to different reinsurers, etc.

It also incentivises better risk management by quantifying risks and providing credit for risk mitigation. For instance, diversification across different lines of business, different geographies (for general insurance), different reinsurers and different financial instrument issuers reduces the capital requirements, encouraging managements and boards to reduce concentration risk.

RBC deepens analysts' understanding of insurance as a business, which over time should further incentivise better risk management and enable more informed investment decisions, similar to Ind AS. If companies are required to publish detailed disclosures on RBC, analysts will be able to benchmark companies against their peers on their exposures to different kinds of risk, leading to a richer understanding of each company's business strategy and competitive advantages.

What challenges does RBC bring?

Unlike Ind AS, where generating the figures itself brought about significant data challenges, the data requirements for populating the regulator's RBC templates are largely available with insurance companies. However, some of the other challenges related to RBC are:

Being a technical standard, **difficulties arise in communicating the new framework and its implications for non-technical stakeholders**, which may include key members of the insurer's management and boards.

While the data is available for populating into regulatory templates, **data and systems need improvement for integrating RBC into day-to-day management and forecasting**, which would benefit from real-time reporting of RBC metrics including impact of reinsurance and other risk mitigation strategies.

RBC may not relax various restrictions of the current framework. One of the expectations various industry players had from RBC was that it would free up capital by easing certain restrictions. For instance, under the current framework, various receivables (e.g. agents' and intermediaries' balances) are valued at 0 if not received within a specified time period. Further, for life insurance companies, the policy-level liabilities are floored to 0 or surrender value (where applicable), whichever is higher, leading to a strain on the company's finances. Such requirements do not exist in most RBC regimes across the globe, since RBC has a more scientific approach to measuring insurance company's financial positions. However, these requirements have been retained in Indian RBC as of IRDAI QIS2, locking up capital.

For the RBC framework to reflect the evolving market conditions, the capital charges will need periodic recalibration. In the standard formula approach adopted by IRDAI, this recalibration will need to be carried out by the regulator at an industry level. Since expertise in RBC is limited, these periodic recalibrations may be delayed.

05

IFRS and RBC—a comparison

Both RBC and IFRS consider a market-based view of the insurance company's balance sheet, where assets and liabilities are both valued on a basis which may be considered as their 'fair value'. This approach differs from the current accounting and solvency regulations which consider book value of assets and (for non-life insurance) undiscounted value of liabilities.

However, the economic balance sheet (EBS) drawn up for RBC differs significantly from that drawn up under IFRS. For instance, as of IRDAI QIS2:

01 Contractual service margin (CSM), which is a measure of the unearned profit of insurance contracts and forms part of IFRS 17 liabilities, is not included as part of RBC's EBS liability. Thus, profit signatures of life insurance products will differ significantly between IFRS and RBC.

02 While IFRS requires acquisitions costs to be deferred over the tenure of the associated policies and for a deferred acquisition cost (DAC) assets to be created, such assets do not exist in RBC's EBS.

03 The approach to risk margin/risk adjustment differs between IFRS and RBC, where RBC requires a cost of capital approach whereas IFRS is pegged to a confidence interval approach (if the insurance company uses a different approach, the equivalent confidence interval needs to be disclosed).

04 Investment valuation differs significantly. While IFRS allows some assets to be measured at amortised cost, RBC requires all assets to be measured at fair value.

05 Lease assets and liabilities, which form a major part of an IFRS balance sheet especially for public-sector insurance companies, are not recorded on the RBC EBS.

The Indian insurance sector could, therefore, be moving towards a regime of multiple views of financial position and solvency rather than a single all-purpose balance sheet, where IFRS/Ind AS will be largely for investors' consumption while RBC EBS will be for regulators' consumption. Embedded value, which listed life insurance companies are required to report as per IRDAI regulations, is meant to capture the risk-adjusted present value of shareholders' interest in the business. Taxation may possibly require another set of financial statements to be drawn up, based on how the tax laws address the move to Ind AS.

Globally, multiple valuation bases/financial statements are the norm for different purposes. No jurisdiction has aligned its RBC framework with IFRS apart from Canada, where the Life Insurance Capital Adequacy Test guidelines were amended in 2025 to be consistent with IFRS 17.[2] However, aligning these bases could be beneficial for the insurance industry since stakeholders will have to invest time in understanding only one set of technical accounts rather than multiple sets with different bases. Further, the differences between the various bases are largely historical and their purposes often overlap. For instance, the already extant embedded value aims to inform shareholders of life insurance companies regarding the value of their investments. The same purpose is also intended to be served by the Ind AS/IFRS accounting standards.

2. https://www.osfi-bsif.gc.ca/en/news/backgrounder-final-life-insurance-capital-adequacy-test-licat-guideline-2025

06

Leveraging technology for financial transformation

Improving data architecture

The maturity of data architecture varies across insurance companies. Several companies have invested significant resources into creating an architecture that captures reliable data and collates data across multiple source systems into a single source of truth which flows into automated KPIs and other last-mile reporting aspects. Other firms which haven't developed data architecture struggle with data siloed across multiple systems, some of which may not capture sufficient or accurate information.

In this context, PwC's Global Actuarial Modernization Survey 2025, which had 200+ participants across the Americas, EMEA, and APC, revealed that:[3]

While over 70% of the participants reported access to accurate and timely data, only 40% have it in standardized, auditable formats, from a single source of truth powered by automated process for ETL.

A key obstacle is inefficient data sourcing, with 55% of respondents reporting that actuaries spend more than 50% of the time dealing with data issues, with only 14% of respondents doing value added analysis.

Therefore, a well-designed centralised data platform, with automated links to source systems and management reports, is a necessity for any insurance company. While such a structure is always advantageous, IFRS and RBC have made real-time financial management indispensable.

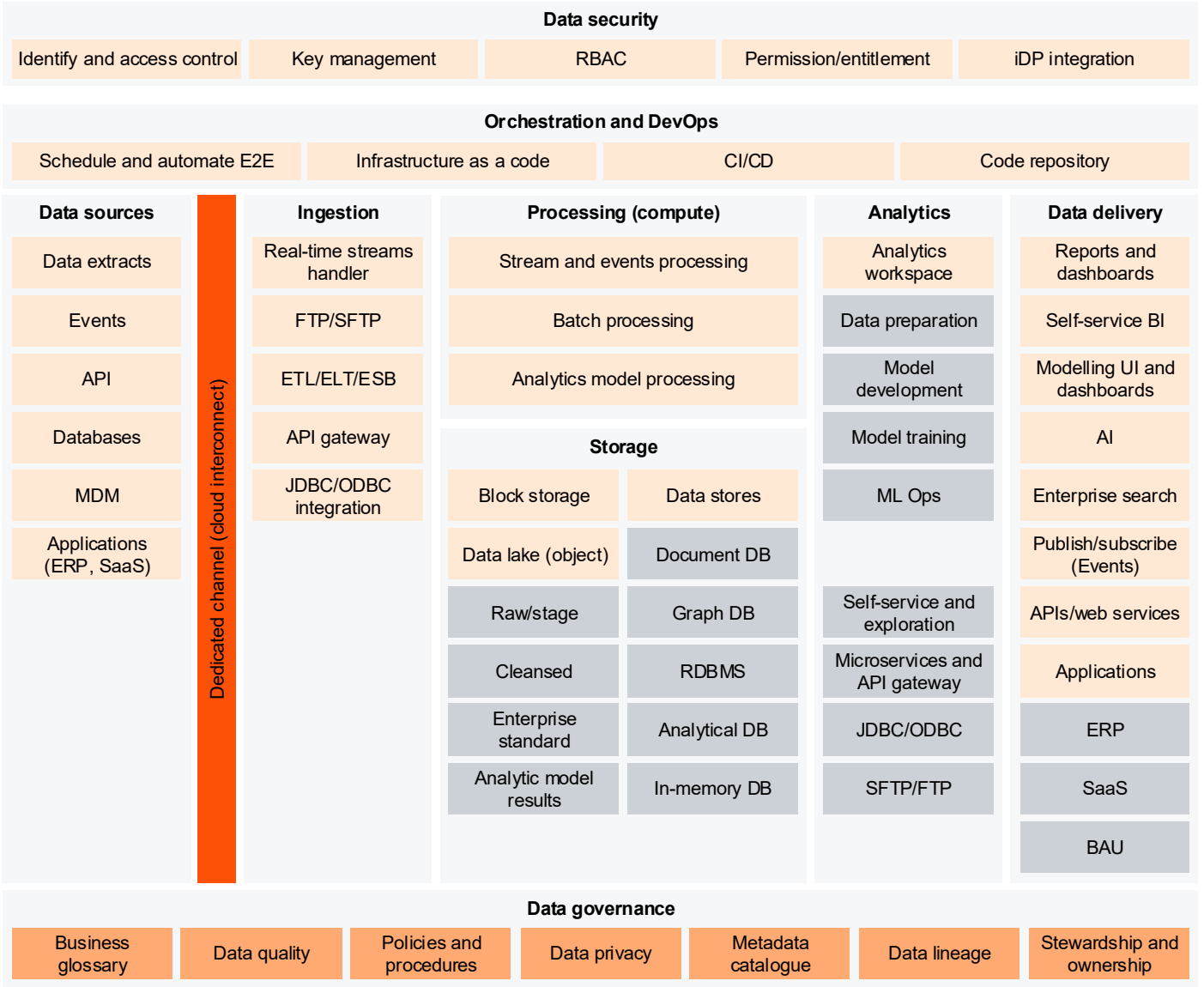
However, this poses challenges since, at present, the underlying data is stored across multiple source systems. Some of the data is also stored manually; the process for capturing and maintaining his data would accordingly need to be automated.

Some of the advantages of a modern digital structure are:

- Reduced time to decision with the availability of real-time insights
- Real-time analytics, reporting and easy management of information
- Rationalised KPIs and informative dashboards leading to efficiency and efficacy.
- Reduced information overload and elimination of obsolete and redundant reports
- Last-mile reporting with highest accuracy.
- Unified data trail across the enterprise which enables data transparency
- Smoother reconciliation among disparate data sources.

3. https://www.pwc.com/gx/en/industries/financial-services/insurance/global-actuarial-modernization-survey-2025.html

Figure 9: Sample architecture



Source: PwC analysis

Note:

API: Application programming interface

MDM: Master data management

ERP: Enterprise resource planning

SaaS: Software as a service

RBAC: Role-based access control

CI/CD: Continuous integration/ continuous deployment

FTP/SFTP: File transfer protocol/ secure file transfer protocol

ETL: Extract, transform, load

ELT: Extract, load, transform

ESB: Enterprise service bus

JDBC: Java database connectivity

ODBC: Open database connectivity

RDBMS: Relational database management systems

DB: Database

ML: Machine learning

AI: Artificial intelligence

UI: User interface

BAU: Business as usual

Modernising the actuarial system

The introduction of new reporting frameworks and accounting standards has substantially increased the complexity of actuarial operations. Modern actuarial models are now required to process vast volumes of high-velocity data originating from both internal systems and diverse external sources. However, traditional actuarial tools often have restricted scalability of legacy systems, making it difficult to process larger and more complex datasets, adding to the run time. As a result, actuarial workflows have remained largely manual and outdated, leading to inefficiencies and delays. A significant amount of actuarial work is still carried out on spreadsheets including core functions such as pricing and (in general/health insurance companies) valuation.

Pricing or valuation models for risk assessment and capital computation often encounter time intensive model development and validation/testing in a typical reporting cycle. Additionally, requirement for computationally intensive calculations such as stochastic simulations for scenario modelling increase the model's run time. These can be time consuming and act as a hinderance for the timely deployment of models and closing of results for reporting, leaving limited time for value-added analysis.

PwC's Global Actuarial Modernization Survey 2025 revealed a strong preference within insurance companies to modernise outdated systems and workflows. In response, organisations that have transitioned to post-implementation phases of IFRS 17 and RBC frameworks are prioritising actuarial modernisation as a strategic initiative to develop operating models that are nimble and agile.

Many survey participants aim to reduce the financial close cycle by at least three days.

Current findings indicate that most organisations are still approximately 10 days behind their target state with more than two days a week in data preparation.

More than 70% of the respondents are relying on outdated legacy systems for reporting. Over 60% of respondents have more than two actuarial modelling platforms with 40% of the participant's models running on vendor hosted cloud environment.[4]

4. https://www.pwc.com/gx/en/industries/financial-services/insurance/global-actuarial-modernization-survey-2025.html

Possible avenues of modernisation may include:

- **Actuarial models:** Consolidate and connect actuarial models on the cloud to reduce model runtime; configure batch processing with event triggers to run models automatically when input files are ready in the data lake.
- **Model code optimisation:** Identifying inefficient coding and optimising the code to enhance run time efficiencies.
- **Environment optimisation:**
  - Efficient distribution/allocation of machine resources during model runs.
  - Configuring efficient runtime parameters and structures within environment.
- **Model run simplification**
  - Adopt AI/ML driven techniques for clustering large datasets typically used on model point files or scenarios to simplify the computational intensity of the model for scenario analysis.
- **Structural model changes**
  - Advance AI methods such as neural network proxy models in place of production heavy models can be used to simplify the complexity of model calculations. These are easy to maintain once calibrated/trained.
  - Achieve significant run time efficiencies especially with calculations involving stochastic methodologies.

Reporting modernisation

The purpose of modernising reporting is to ensure accuracy, reliability and compliance with actuarial reports with relevant standards and regulations. These reports are often manually compiled, which is time-consuming and could increase the possibility of lapses or non-compliance. Manual preparation also leads to human errors leading to regulatory damage and reduced credibility.

Furthermore, the push from CFO's and chief actuaries for more frequent reporting and results also creates the need for more streamlined and modernised actuarial functions so that actuaries can draw data-driven insights for strategic decision-making and business forecasting quickly.

Some of the ways by which organisations can modernise their reporting are:

Automation of reports: Automation of accounting and regulatory reports and audit trail through robotic process automation to enhance compliance and faster reporting.

Intelligent insights: Create analytics, dashboards for self-service reporting and analysis using intelligent data visualisation tools.

Advanced analytics and automation: Use advanced analytics in MI and automated reporting, including results commentary using AI/ML techniques.

PwC's Global Actuarial Modernization Survey 2025 revealed that insurance companies are already making significant progress in this regard. More than 90% of the participants are planning to implement advanced technologies to create efficiencies and obtain deeper insight, with around two-thirds already achieved business intelligence and cloud capabilities and around half of them expecting to achieve AI/ML capabilities within next two years.[5]

5. Ibid

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Illustrative use case

Let's take the example of a commission calculation algorithm where the commission payable on each policy is linked to the real-time contribution of that policy to the company's risk-adjusted profit, similar to the dynamic pricing algorithms prevalent in other industries.

Such a smart commission algorithm could incentivise agents and other insurance intermediaries to source policies which improve an insurance company's financial position.

Creating such a mechanism is technically feasible. Some relevant parameters which are already maintained manually by various departments (largely finance and actuarial) in the company's head office need to be captured in the company's data systems and the relevant actuarial calculations can be carried out in real time. The level of detail used by such an algorithm can be as granular as needed.

For example, when a non-life insurance company has written too many fire policies in a particular RBC earthquake zone, the commission algorithm can lower commissions on policies in that zone and increase commissions on policies in other zones. By incentivising agents to sell in other zones, the algorithm maximises the amount of diversification benefit which can be claimed by the company. Due to the complexity of insurance accounting, forecasting the profitability of a policy in an IFRS world involves several factors which may not currently be captured in IT systems:

Profitability factor	Source system in current architecture
Expected loss ratio	Pricing systems/rate tables
Expected expense ratio	General ledger system
Earning and claim payment periods	Not in system (will need to be in-system for IFRS)
Best estimate claims reserves	Not in system (will need to be in-system for IFRS)
Risk adjustment	Not in system (will need to be in-system for IFRS)
Discount rates	Not in system (will need to be in-system for IFRS)
RBC factors	Not in system
Diversification factors	Not in system

If the above factors are brought into a centralised system, it is possible to calculate the expected profitability of a policy on a real-time basis, including the discounted impact of claims, expenses, and cost of maintaining reserves and capital after accounting for diversification. After keeping a fixed proportion of discounted surplus aside for the insurance company's profit, the remainder can be passed on to intermediaries as commission; this would align the intermediaries' incentives with the insurance company's profitability metrics.

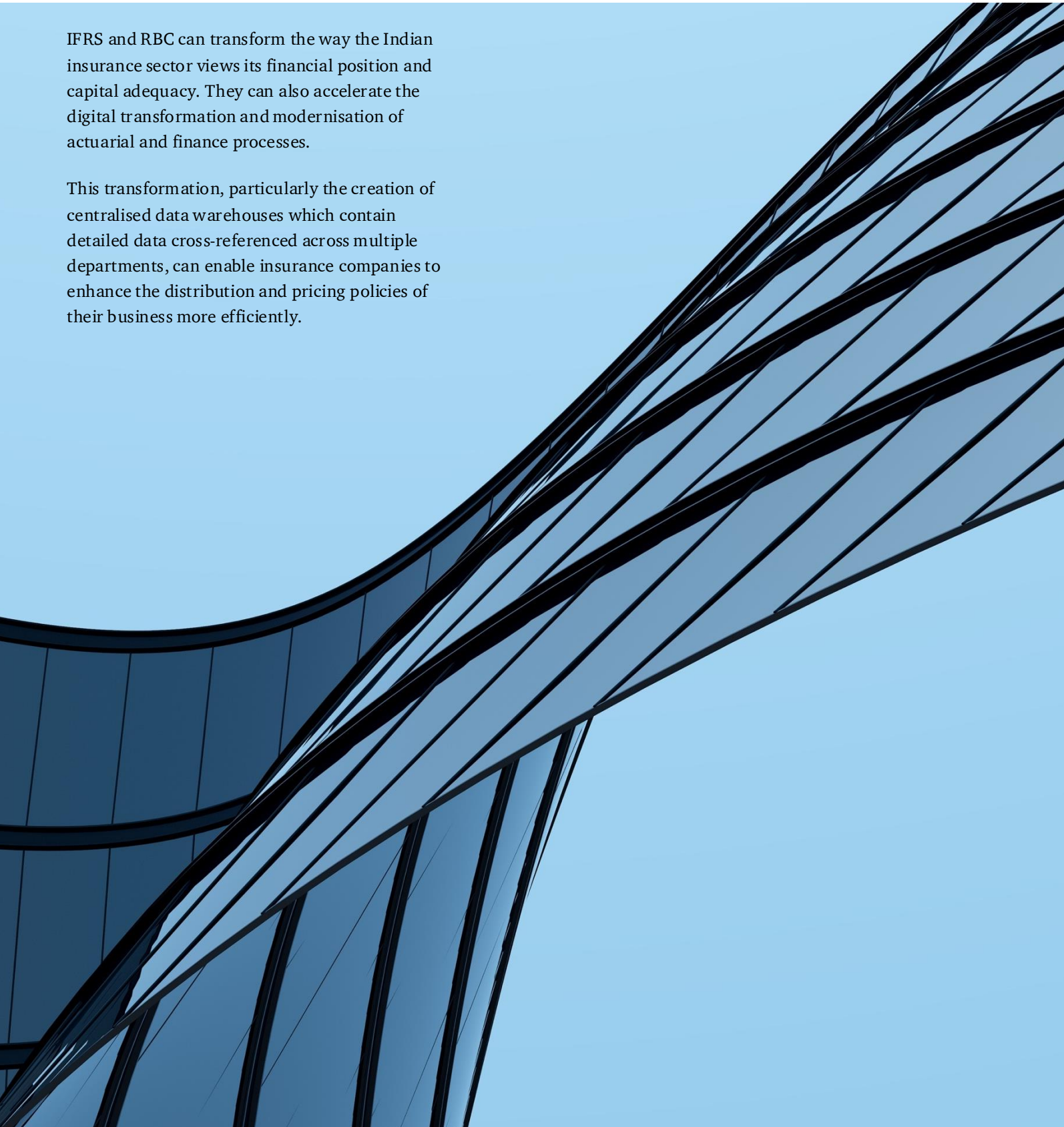
A natural extension to dynamic commissions is dynamic pricing, where the prices of insurance policies change in real time based on how they would affect the company's financial position. However, in an Indian context, this idea may raise regulatory concerns around differential pricing for similar risks.

08

Way forward for the insurance sector

IFRS and RBC can transform the way the Indian insurance sector views its financial position and capital adequacy. They can also accelerate the digital transformation and modernisation of actuarial and finance processes.

This transformation, particularly the creation of centralised data warehouses which contain detailed data cross-referenced across multiple departments, can enable insurance companies to enhance the distribution and pricing policies of their business more efficiently.



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AP_November 2025 - M&C 49520