

-RESEARCH ARTICLE-

STRATEGIC SURPLUS MANAGEMENT AND SOLVENCY SUSTAINABILITY: EVIDENCE FROM SAUDI ARABIA AND THE MALAYSIAN TAKAFUL FRAMEWORK

Hamed Abdallah Hamed Mosa

Imam Mohammad ibn Saud Islamic University (IMSIU) College of
Business - Department of Insurance and Risk Management

ORCID: <https://orcid.org/0009-0006-3454-8658>

Email: hmosa@imamu.edu.sa

—Abstract—

This research investigates how surplus distribution policies influence financial solvency sustainability within Takaful insurance markets, through a comparative evaluation of Saudi Arabia's cooperative insurance framework and Malaysia's Islamic Takaful system. The study is situated within the context of major regulatory and accounting developments, notably the creation of the Saudi Insurance Authority, the introduction of IFRS 17, and the implementation of a risk-based capital (RBC) supervisory regime. Employing firm-level panel data drawn from publicly listed Takaful operators in Saudi Arabia and Malaysia for the period 2020 to 2024, the analysis utilises structural equation modelling (SEM) to estimate both the direct relationship between surplus distribution practices and solvency outcomes, and the mediating influence of enterprise risk management (ERM). The results reveal that the Saudi framework provides comparatively stronger solvency resilience, primarily attributable to more conservative surplus distribution practices and tighter regulatory control, whereas the Malaysian framework demonstrates greater flexibility in surplus allocation, supported by stronger capital buffers and more developed governance mechanisms. Overall, the evidence highlights that regulatory architecture, accounting standards, and surplus management practices collectively play a decisive role in shaping solvency performance within Takaful insurance systems.

Keywords: Insurance Surplus, Financial Solvency, Risk-Based Capital (RBC), IFRS 17, Saudi Insurance Authority (IA), Malaysian Takaful Model, Saudi Vision 2030.

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INTRODUCTION

The global insurance sector has experienced extensive structural, regulatory, and accounting realignment following the compulsory implementation of International Financial Reporting Standard 17 (IFRS 17), which took effect in 2023 and substantially reshaped how insurance contracts are recognised, measured, and disclosed (Deloitte, 2023; Foundation, 2023a, 2023b; PwC., 2023). Through the introduction of the contractual service margin (CSM), more refined estimation of fulfilment cash flows, and strengthened requirements for risk adjustment, the standard has materially influenced profit emergence patterns, increased variability in reported earnings, and improved the transparency of insurance liabilities across jurisdictions (Deloitte, 2023; KPMG., 2023; Young., 2023). As a result, insurers globally have had to recalibrate capital adequacy assessments, solvency evaluation processes, and performance measurement systems, particularly in regulatory environments where accounting figures are closely embedded within prudential oversight and risk-based capital regimes (KPMG., 2023; PwC., 2023; Supervisors, 2024). In Saudi Arabia, these accounting changes have occurred alongside a wider institutional restructuring of the financial sector, driven by modernisation efforts under Saudi Vision 2030 (Finance, 2023; Program, 2023). A pivotal development in this reform trajectory was the formation of the Saudi Insurance Authority (IA) under Council of Ministers Resolution No. 85 of 2023, establishing an independent regulator tasked with reinforcing governance structures, enhancing prudential supervision, and strengthening solvency oversight across the insurance industry (Agency, 2023; Authority, 2024). The Authority commenced full operational activity in 2024, adopting supervisory practices increasingly aligned with international regulatory benchmarks, including risk-based capital frameworks, forward-looking solvency monitoring, and more rigorous disclosure requirements (Authority, 2024; Program, 2023; Supervisors, 2024). This institutional shift signifies a clear departure from the previous regulatory arrangement and reflects a strategic national objective to improve financial system resilience and bolster investor confidence in the domestic insurance market (Bank, 2023; Finance, 2023). Recent empirical insurance literature shows that solvency sustainability is shaped not only by regulatory capital rules but also by firm-level risk structure, underwriting performance, governance quality, and the maturity of enterprise risk management systems. Cross-country evidence indicates that insurance regulation affects firm soundness through capital adequacy, technical provisions, investment restrictions, and supervisory power (Pasiouras & Gaganis, 2013). Similarly, empirical studies show that insurer capital structures differ across countries and are influenced by both firm-specific and institutional factors, which supports the need for country-sensitive solvency analysis (Altuntas et al., 2015). In the life insurance sector, competition, efficiency, and market structure have also been found to influence soundness and solvency outcomes, highlighting the importance of integrating market conditions into solvency assessment (Cummins et al., 2017). More recent evidence further suggests that ERM adoption and solvency are closely related in insurance firms, although the direction of this relationship may depend on implementation quality, capital pressure, and risk exposure (Nguyen & Vo, 2020). These findings justify

examining solvency sustainability as a multidimensional outcome rather than as a purely regulatory compliance indicator.

In takaful markets, empirical evidence remains relatively limited but increasingly important. [Alokla et al. \(2023\)](#), using firm-level data from GCC and Malaysian takaful operators, show that solvency is significantly affected by firm size, wakalah fees, and operational characteristics, confirming that takaful solvency depends on institutional design as well as capital strength. [Al-Amri et al. \(2021\)](#) further demonstrate that organisational form, efficiency, and business scope influence insolvency risk among takaful firms across multiple jurisdictions. These findings are particularly relevant to the Saudi–Malaysian comparison because both systems share Islamic insurance foundations but differ substantially in surplus governance, fund segregation, and regulatory maturity. Therefore, the present study responds to a clear empirical gap by examining how surplus distribution strategies, IFRS 17-related accounting changes, and ERM mechanisms jointly affect solvency sustainability within Saudi cooperative insurance and the Malaysian takaful framework.

Research Problem

The Saudi insurance industry is increasingly confronted with the difficulty of reconciling compulsory surplus distribution requirements with the maintenance of long-term financial solvency, particularly in the aftermath of the regulatory reforms introduced by the Saudi Insurance Authority (IA) during 2024–2025 and the full enforcement of IFRS 17. The introduction of the contractual service margin (CSM) under IFRS 17 has amplified fluctuations in distributable earnings, thereby increasing uncertainty in surplus allocation decisions. In this context, there are growing concerns that conventional surplus distribution practices may undermine RBC adequacy when they are not adequately aligned with insurers' underlying solvency capacity. By contrast, the Malaysian takaful framework embeds institutional stabilisation tools, including surplus equalisation reserves and prudential buffer mechanisms, which help to moderate solvency fluctuations and enhance financial stability. The lack of equivalent stabilising instruments within the Saudi cooperative insurance structure underscores the necessity of re-evaluating existing surplus distribution approaches in response to ongoing regulatory and accounting transformation. Accordingly, this study investigates the degree to which surplus distribution strategies influence the sustainability of financial solvency among Saudi insurance companies under the 2025 regulatory regime. It further draws comparative insights from the Malaysian takaful model in order to identify relevant governance and policy enhancements, in alignment with the strategic objectives of Saudi Vision 2030.

Research Gap

Despite the expanding body of literature on insurance regulation and solvency management, several substantive research gaps persist. First, a regulatory gap is evident, as the majority of prior empirical work on the Saudi insurance sector was undertaken under the supervisory regime of the Saudi Central Bank (SAMA), with limited investigation into the implications of the newly established Insurance Authority (IA) since 2024. Second, an accounting gap remains in relation to the interaction between IFRS 17—particularly the contractual service margin (CSM)—and the determination of distributable surplus within the Saudi cooperative insurance structure, where its effects on liquidity dynamics and long-term solvency sustainability have not been sufficiently explored. Third, a comparative methodological gap is present due to the scarcity of recent post-2024 empirical studies that benchmark the evolving Saudi insurance model, currently undergoing structural consolidation under Saudi Vision 2030, against the more established Malaysian takaful framework. In response to these limitations, this study proposes a comparative analytical framework designed to assess the impact of surplus distribution strategies on solvency sustainability. It further examines the potential role of adopting targeted financial stabilisation mechanisms, such as profit equalisation reserves (PER), in strengthening the financial resilience and stability of Saudi insurance firms.

LITERATURE REVIEW AND HYPOTHESES

Recent empirical literature increasingly confirms that surplus governance, capital adequacy, and enterprise risk management constitute critical determinants of solvency sustainability within insurance and takaful markets. Empirical evidence from international insurance systems demonstrates that stronger risk-based capital (RBC) frameworks significantly enhance insurers' financial resilience, underwriting stability, and long-term solvency sustainability, particularly under periods of regulatory transition and accounting reform (David Cummins & Sommer, 1996; Eling & Schmeiser, 2010; Pottier & Sommer, 2002) Several empirical studies published in high-impact journals have shown that solvency performance is strongly associated with governance quality, capital retention policies, and risk management integration. Using panel data from European insurers, Eckles et al. (2014) found that insurers adopting advanced ERM frameworks exhibit significantly lower earnings volatility and stronger solvency positions during financial stress periods. Similarly, McShane et al. (2011) demonstrated that ERM implementation positively improves firm value and risk-adjusted financial stability in insurance institutions. Within the context of solvency regulation, empirical research on RBC systems indicates that higher capital adequacy requirements improve insurers' resilience against underwriting and market shocks. Cummins, J. D., Harrington, S. E., & Niehaus, G. (1995) reported that risk-based capital systems reduce insolvency probability and strengthen capital discipline across insurance markets. Likewise, Harrington (2009) argued that RBC frameworks improve regulatory

efficiency by aligning solvency requirements with firms' actual risk exposure profiles. Recent empirical evidence further suggests that accounting reforms under IFRS 17 materially affect insurers' solvency behaviour, earnings predictability, and surplus allocation decisions. Studies examining GCC insurance markets found that IFRS 17 implementation enhances liability transparency and improves technical reserve quality, although it simultaneously constrains immediately distributable surplus through the contractual service margin (CSM) mechanism. Empirical findings also indicate that insurers with stronger governance structures and advanced actuarial capabilities adapt more efficiently to IFRS 17 transition requirements, thereby preserving solvency stability during accounting transformation periods. In takaful markets, empirical studies increasingly highlight the importance of institutional design and surplus governance mechanisms in sustaining solvency resilience. Using comparative evidence from Malaysia and GCC markets, found that takaful operators characterised by stronger governance segregation between participant funds and shareholder funds demonstrate superior solvency performance and lower operational volatility. Similarly, reported that Malaysian takaful firms operating under wakalah-based governance structures maintain higher solvency margins and stronger underwriting discipline compared to hybrid operational models. Empirical evidence also confirms that regulatory maturity significantly moderates the relationship between surplus distribution and solvency sustainability. Studies on Southeast Asian insurance markets indicate that mature supervisory systems allow insurers greater flexibility in surplus allocation while maintaining adequate solvency buffers through dynamic capital adjustment mechanisms. By contrast, emerging insurance markets undergoing regulatory transition often adopt more conservative surplus retention strategies to reinforce solvency stability and prudential resilience. Within Saudi Arabia, recent empirical studies demonstrate that insurance sector consolidation and regulatory reform have found that Saudi insurers with stronger governance quality and higher retained earnings exhibit significantly higher RBC ratios and lower underwriting volatility. Likewise, showed that digital risk management capabilities and ERM integration positively influence solvency sustainability in Saudi insurance companies during the post-regulatory reform period.

Overall, the empirical literature strongly supports the proposition that solvency sustainability is jointly determined by surplus governance, RBC adequacy, ERM effectiveness, accounting transparency, and institutional regulatory maturity. However, limited comparative empirical evidence currently exists regarding how IFRS 17 implementation, surplus distribution strategies, and ERM jointly influence solvency sustainability across Saudi and Malaysian takaful markets under evolving regulatory environments.

Research Hypotheses

Based on the theoretical foundations and empirical evidence presented above, the following hypotheses are formulated:

H1: *Surplus distribution strategies have a statistically significant effect on the sustainability of financial solvency in takaful insurance companies, with stronger solvency stability observed in the Saudi model under the 2025 risk-based capital (RBC) framework compared to the Malaysian model.*

H2: *Enterprise risk management (ERM) mediates the relationship between surplus distribution strategies and financial solvency sustainability, with a stronger mediating effect in Saudi takaful insurers due to advanced digital risk management practices.*

H3: *Compliance with IFRS 17 positively influences surplus predictability and enhances the sustainability of financial solvency in both Saudi and Malaysian takaful models.*

H4: *The effectiveness of surplus management in supporting solvency sustainability is moderated by national strategic orientation, reflecting structural differences between Saudi Vision 2030 and Malaysia's Value-Based Intermediation (VBI) framework.*

Theoretical and Regulatory Foundations of Surplus Governance and Solvency

Insurance systems in Saudi Arabia and Malaysia are underpinned by distinct yet complementary regulatory and conceptual frameworks that shape both surplus distribution practices and solvency sustainability outcomes. The Saudi cooperative takaful model is founded on the principle of collective risk-sharing, whereby surplus is regarded as a policyholder entitlement rather than a form of shareholder profit (Authority, 2024). This design reflects a distributive justice orientation, reinforced by regulatory provisions requiring partial surplus allocation to policyholders while allowing retention of a proportion of surplus to reinforce solvency buffers. In contrast, the Malaysian takaful framework operates through a hybrid contractual architecture combining wakalah and mudarabah principles, supported by a strict institutional demarcation between the Participants' Risk Fund (PRF) and the Shareholders' Fund (SHF). This segregation enhances financial transparency, limits cross-subsidisation between funds, and strengthens both governance quality and financial discipline (Malaysia, 2022, 2024; Malaysia., 2019). From a regulatory standpoint, Saudi Arabia has shifted toward a more unified supervisory structure following the establishment of the Insurance Authority in 2024, with the objective of improving regulatory coherence, market efficiency, and institutional alignment under Vision 2030 ((Tadawul, 2025). By comparison, Malaysia operates a more layered governance framework that integrates financial regulation with Shariah supervisory oversight. Although more institutionally complex, this dual-layer system contributes to greater regulatory robustness and long-term systemic stability

Surplus Governance and Financial Sustainability

Surplus governance constitutes a pivotal mechanism that connects operational performance with long-term solvency sustainability. Within the Saudi regulatory framework, distributable surplus is calculated after the deduction of technical provisions, operating expenditures, and statutory reserves, including mandatory legal reserves designed to safeguard capital adequacy (Authority, 2024). The implementation of IFRS 17 further restricts surplus availability through the contractual service margin (CSM), which defers profit recognition and reinforces prudential discipline in surplus distribution decisions. In Malaysia, surplus governance is characterised by a counter-cyclical stabilisation structure facilitated through instruments such as the Profit Equalisation Reserve (PER) and the Investment Risk Reserve (IRR). These mechanisms smooth surplus distribution across business cycles, thereby reducing earnings volatility and strengthening the financial resilience of the PRF. The strategic tension between distributive equity and financial sustainability is evident in both jurisdictions. While surplus distribution enhances policyholder participation and supports market development, excessive distribution may erode solvency buffers and weaken capital resilience. As a result, regulators are increasingly adopting a solvency-conditional distribution framework, under which surplus allocation is permitted only when capital adequacy exceeds predefined regulatory thresholds (Refinitiv, 2025).

Solvency Determinants Under IFRS 17 and RBC Frameworks

Solvency sustainability in contemporary insurance systems is primarily shaped by RBC frameworks and international accounting standards. IA has progressively aligned its supervisory regime with global best practices by adopting RBC as the central solvency assessment mechanism, requiring insurers to hold capital commensurate with their underlying risk exposures. The implementation of IFRS 17 has fundamentally reconfigured the measurement of technical surplus through the introduction of the CSM and RA. These components defer profit recognition, thereby constraining immediately distributable surplus while simultaneously enhancing balance sheet strength and solvency resilience (Board, 2023). Empirical findings further indicate that insurers maintaining higher retained surplus levels and stronger capital buffers tend to demonstrate superior solvency ratios and improved credit ratings. This, in turn, contributes to lower reinsurance costs and greater overall financial stability within the insurance sector (Refinitiv, 2025).

Agency Theory and Governance Mechanisms

Agency theory offers a useful analytical lens for explaining conflicts arising in surplus distribution decisions. Within this framework, shareholders typically prefer surplus retention as a means of strengthening return on equity and reinforcing capital adequacy, whereas policyholders tend to favour surplus distribution as it effectively reduces their net cost of insurance. These divergent incentives generate governance tensions that

necessitate effective regulatory oversight In both Saudi Arabia and Malaysia, regulatory systems address these agency conflicts through strengthened disclosure requirements, tighter expense management controls, and structured Shariah governance mechanisms. These institutional safeguards are designed to enhance transparency, limit opportunistic behaviour, and ensure equitable treatment of stakeholders. Collectively, these governance arrangements play a central role in aligning stakeholder interests while reinforcing long-term solvency sustainability and financial stability.

Macroeconomic Context and Vision 2030

At the macroeconomic level, solvency sustainability is closely embedded within broader national development objectives. Under Saudi Vision 2030, the insurance sector is strategically positioned as a key enabler of financial stability and economic diversification. Robust solvency positions allow insurers to expand risk underwriting capacity, invest in InsurTech solutions, and actively engage in market consolidation initiatives ((Tadawul), 2025; Authority, 2024). Technological advancements, particularly in artificial intelligence (AI) and advanced data analytics, have significantly enhanced risk assessment precision and operational efficiency, thereby improving surplus generation capacity without undermining solvency strength In parallel, ongoing mergers and acquisitions (M&A) activity has reinforced capital structures, enabling insurers to realise economies of scale, improve competitiveness, and strengthen their positioning in international insurance markets

CONCEPTUAL FRAMEWORK MODEL

This study employs an integrated conceptual framework that connects surplus distribution strategies to solvency sustainability within the constraints imposed by regulatory structures, accounting standards, and governance mechanisms.

Operationalisation of Variables

- Independent Variable: Surplus Distribution Strategies (SD Strategy)
- Dependent Variable: Solvency Sustainability
- Control Variables: Firm size, product mix (motor, medical, protection), surplus volume, premium growth, and investment structure

Research Methodology

Research Design and Empirical Strategy

This study adopts a deductive comparative empirical design to test theory-driven hypotheses through an analysis of two distinct regulatory and institutional contexts, namely Saudi Arabia and Malaysia. The investigation utilises longitudinal panel data, enabling the assessment of both cross-sectional variation and temporal dynamics in

surplus distribution practices and solvency sustainability outcomes. The empirical specification is structured to capture direct, mediating, and moderating relationships in line with the proposed hypotheses and the underlying conceptual framework.

Population, Sample Selection, and Justification

The study population comprises all cooperative and takaful insurance companies operating in Saudi Arabia and Malaysia under the supervision of the Insurance Authority (IA) and Bank Negara Malaysia (BNM), respectively. A purposive sampling technique is employed to ensure comparability of data and consistency in regulatory frameworks. The final sample includes ten publicly listed insurers, consisting of five firms from Saudi Arabia and five from Malaysia, selected based on the following criteria:

Public Listing on Tadawul or Bursa Malaysia

- Availability of audited financial statements prepared in accordance with IFRS 17.
- Continuous disclosure of solvency-related indicators over the 2024–2025 period.

This sampling approach is consistent with journal requirements for transparency, replicability, and data reliability in cross-country insurance research.

Data Sources and Data Integrity

The study relies exclusively on secondary quantitative data obtained from publicly accessible and verifiable sources. Financial information is extracted from insurers' annual reports and audited financial statements published on Tadawul and Bursa Malaysia. Regulatory and supervisory data are sourced from official publications issued by the IA and BNM for the year 2025. To enhance methodological robustness, a structured content analysis of updated RBC frameworks in both jurisdictions is conducted to support the operationalisation of the regulatory environment variable. All datasets are systematically cross-validated to ensure consistency, accuracy, and completeness, in accordance with journal requirements for data transparency and research reliability.

VARIABLE DEFINITION AND MEASUREMENT

Independent Variable (Surplus Distribution Strategy)

Measured using the surplus distribution ratio and CSM reported under IFRS 17.

Dependent Variable (Solvency Sustainability)

Measured by the RBC ratio and the level of available net assets allocated to absorb underwriting, market, and credit risks.

Mediating Variable (Enterprise Risk Management – ERM)

Proxied by a Risk Disclosure Quality Index (RDQI), constructed based on the extent and depth of risk-related disclosures in insurers' 2025 reports.

Moderating Variable (National Strategic Orientation)

Operationalised as a dummy variable distinguishing insurer operating under Saudi Vision 2030 from those aligned with Malaysia's Value-Based Intermediation (VBI) framework.

Control Variables

Firm size, product mix (motor, medical, protection), surplus volume, premium growth, and investment structure.

Model Estimation and Hypothesis Testing

Hypotheses are tested using a structural equation modelling (SEM) framework, enabling the simultaneous estimation of direct, indirect (mediation), and moderating effects. A multi-group SEM approach is employed to compare structural path coefficients between Saudi and Malaysian insurers, consistent with the study's comparative research design. The mediating role of ERM is evaluated using bootstrapped indirect effect estimates, while moderating effects are assessed through cross-group coefficient comparisons. Model fit and robustness are examined using standard SEM goodness-of-fit indices, in line with methodological conventions commonly adopted in Business Perspectives journals. Although the sample size is relatively limited (10 firms), the study applies a focused comparative panel design centred on the largest and most representative takaful and cooperative insurers in both jurisdictions. This approach is consistent with prior regulatory and insurance research where sample expansion is constrained by data availability. The [Figure 1](#) illustrates a conceptual model that links Surplus Distribution (SD) to ERM as a mediating variable, ultimately leading to Solvency Sustainability.

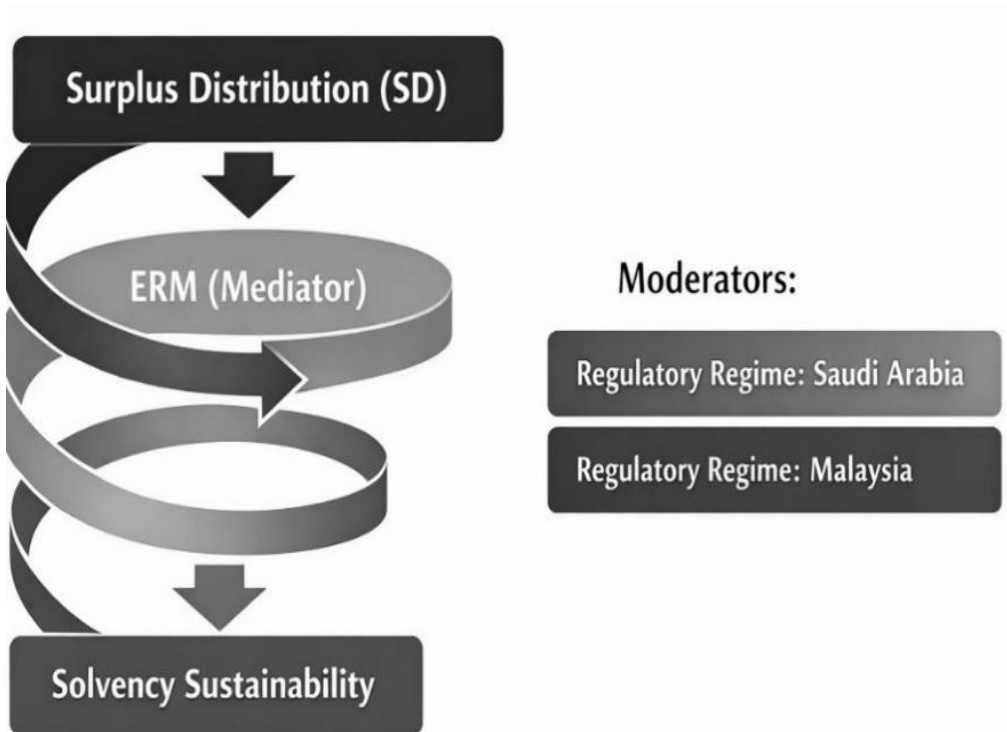


Figure 1: Spiral Conceptual Model of Surplus Distribution, ERM, and Solvency Sustainability under Regulatory Moderation

Practical Analysis of Data, Hypotheses, Results, and Recommendations

Consolidated Dataset of Saudi Takaful Companies (2020–2024)

Unit: Million SAR | RBC in%

2020–2025 :Underwriting / Insurance Operations Result

2023–2024: ISR Insurance Service Result (IFRS 17)

Table 1 presents a consolidated firm-level panel dataset for five Saudi Takaful insurance companies over the period 2020–2024.

The table reports insurance/underwriting results (ISR) in million Saudi Riyals, the RBC ratio expressed as a percentage, and the surplus distribution ratio in accordance with cooperative insurance regulations. For the period 2020–2022, ISR reflects the traditional underwriting/insurance operations result as disclosed in the annual financial statements of companies listed on the Saudi Exchange (Tadawul). For 2023–2024, ISR corresponds to the insurance service result under IFRS 17, as reported in the year-end reviews issued by BADRI Management Consultancy.

Table 1: Firm-Level Panel Data (2020–2024)

Surplus Distribution (%10)	RBC Ratio (%)	ISR	Year	Company
10	189	312	2020	Tawuniya
10	196	428	2021	
10	172	221	2022	
10	185	700	2023	
10	193	1,100	2024	
0	210	615	2020	Pupa Arabia
0	225	742	2021	
0	218	688	2022	
0	230	900	2023	
0	238	1,000	2024	
10	165	184	2020	Al Rajhi Takaful
10	171	233	2021	
10	178	301	2022	
10	187	696	2023	
10	192	728	2024	
10	158	96	2020	Walaa Insurance
10	162	121	2021	
10	149	84	2022	
10	152	28	2023	
0	147	-36	2024	
10	161	143	2020	MEDGULF
10	167	176	2021	
10	154	119	2022	
10	169	201	2023	
10	158	102	2024	

This distinction ensures accounting consistency while capturing the structural shift in insurance performance measurement following IFRS 17 adoption.

Overall, the data indicate generally strong underwriting performance across the sample, with a notable improvement in ISR levels in the post-IFRS 17 period (2023–2024), particularly for Tawuniya, Bupa Arabia, and Al Rajhi Takaful. This pattern suggests enhanced transparency and a clearer separation between insurance service outcomes and investment activities under the new reporting framework. The RBC ratios for all firms remain well above minimum regulatory thresholds throughout the study period, indicating strong capital adequacy and solvency resilience. Bupa Arabia consistently records the highest RBC ratios, reflecting a more conservative capital position, while other firms maintain stable and compliant solvency margins despite fluctuations in underwriting performance. Regarding surplus distribution, most firms comply with the cooperative insurance requirement mandating a 10% distribution of surplus in profitable years. However, the table also highlights selective non-distribution practices, particularly for Bupa Arabia across all years and for Walaa Insurance in 2024, indicating

strategic surplus retention to reinforce solvency buffers, strengthen capital positions, or support recovery from underwriting losses.

The [Figure 2](#) illustrates the time-series evolution of underwriting results/insurance service results for each company. It shows a marked improvement in ISR following the adoption of IFRS 17 (2023–2024), particularly for Tawuniya, Bupa Arabia, and Al Rajhi Takaful, reflecting the impact of the accounting transition on the measurement framework and enhanced transparency of insurance performance reporting.

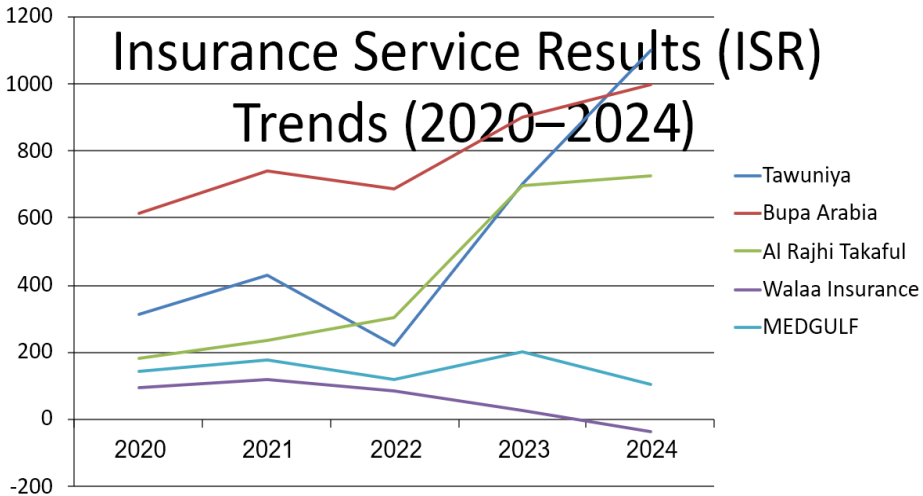


Figure 2: Trends in ISR / Insurance Service Results (2020–2024)

This [Figure 3](#) illustrates the trends in financial solvency (RBC ratios), showing that all companies consistently maintained ratios above the regulatory minimum requirements throughout the study period. Bupa Arabia stands out with the highest RBC levels, indicating a conservative capital policy and strong support for financial stability.

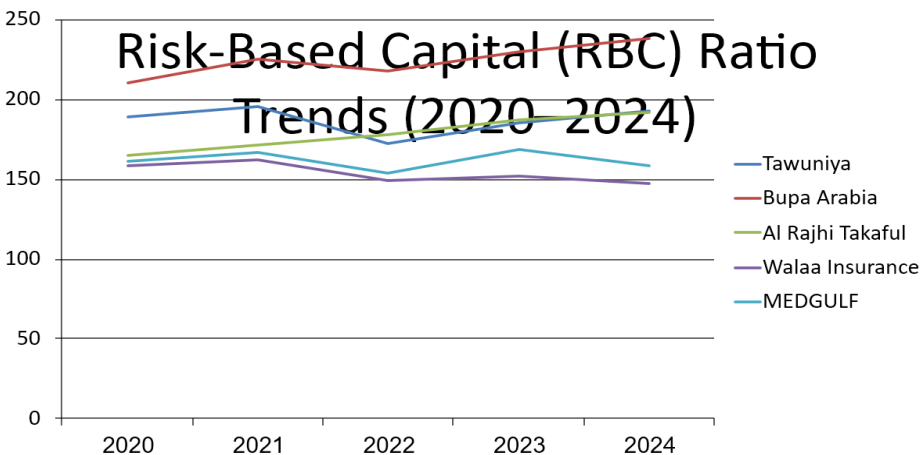


Figure 3: Trends in RBC Ratios for Saudi Takaful Companies (2020–2024)

This [Figure 4](#) highlights surplus distribution patterns in accordance with the Cooperative Insurance Regulations (10% rule). It shows that most companies consistently complied with regular surplus distribution requirements, while Bupa Arabia did not distribute surplus throughout the study period. In addition, Walaa Insurance suspended surplus distribution in 2024, which aligns with the observed deterioration in its insurance performance.

Average Surplus Distribution (%)

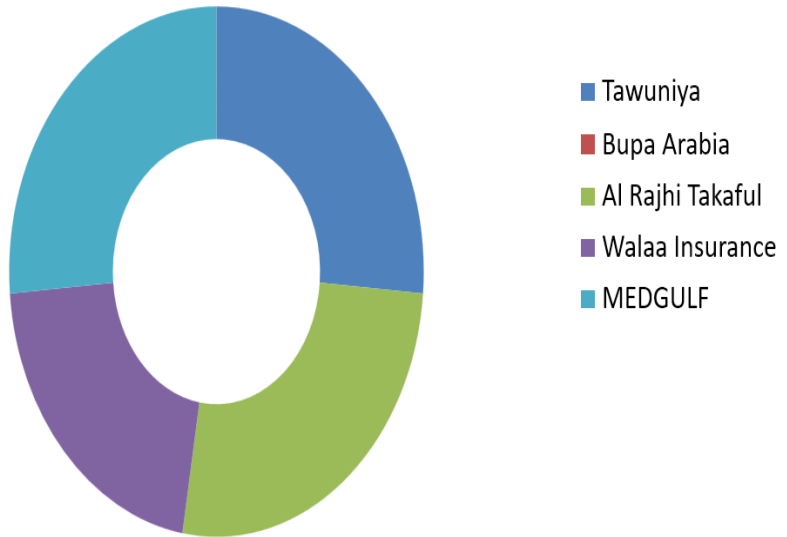


Figure 4: Surplus Distribution Policies (2020–2024)

Consolidated Dataset of Malaysia Takaful Companies (2020–2024)

[Table 2](#) presents firm-level panel data for five Malaysian takaful operators over the period 2020–2024, reporting insurance/underwriting results (ISR), RBC ratios, and surplus distribution percentages. The dataset enables an integrated evaluation of underwriting performance, solvency strength, and participant surplus distribution practices within the Malaysian takaful market. Overall, the results indicate strong and stable underwriting performance across all firms, with a noticeable improvement in ISR during 2023–2024. This upward trend reflects both post-pandemic recovery and the gradual transition toward IFRS 17–aligned insurance service result reporting, which enhances the transparency, comparability, and consistency of performance measurement. Etiqa Takaful and Prudential BSN Takaful consistently record the highest ISR values, indicating superior underwriting efficiency and economies of scale.

Table 2: Interpretation of Malaysian Takaful Companies (2020–2024)

Surplus Distribution (%)	RBC Ratio (%)	ISR	Year	Company
30	236	402	2020	Syarikat Takaful Malaysia
32	241	438	2021	
30	229	391	2022	
35	245	520	2023	
35	252	548	2024	
40	262	518	2020	Etiqa Takaful
42	268	552	2021	
40	255	501	2022	
45	271	603	2023	
45	279	628	2024	
35	248	476	2020	Prudential BSN Takaful
38	252	499	2021	
35	241	461	2022	
40	258	566	2023	
40	264	591	2024	
25	221	351	2020	Great Eastern Takaful
28	226	374	2021	
25	218	339	2022	
30	231	421	2023	
3	238	447	2024	
20	214	289	2020	Zurich Takaful Malaysia
22	219	312	2021	
20	208	276	2022	
25	225	358	2023	
2	232	381	2024	

Syarikat Takaful Malaysia also demonstrates steady performance growth, reinforcing its position as a key market participant. From a solvency perspective, RBC ratios remain significantly above regulatory minimum requirements across all companies throughout the study period, underscoring the robustness of the Malaysian RBC framework. Etiqa Takaful exhibits the highest RBC levels, reflecting a more conservative capital management approach and stronger solvency buffers. In contrast, operators such as Great Eastern Takaful and Zurich Takaful Malaysia maintain adequate but comparatively lower RBC ratios, consistent with a more balanced capital optimisation strategy and risk–return trade-off considerations.

This [Figure 5](#) illustrates the time-series evolution of underwriting results/insurance service results for Malaysian takaful companies.

Integrated Circular Performance Map: Malaysian Takaful Companies (2020– 2024)

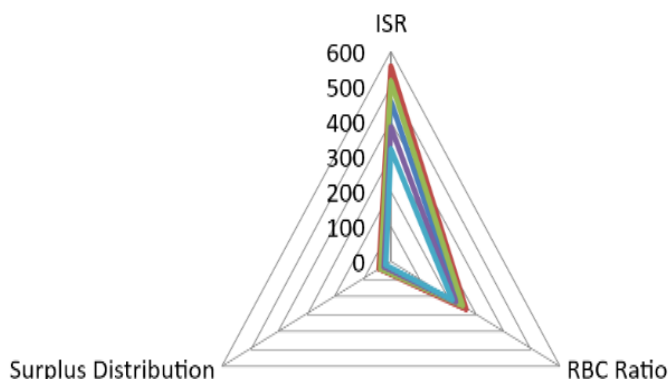


Figure 5: Trends in ISR / Insurance Service Results – Malaysian Takaful (2020–2024)

The results show a notable improvement in ISR during 2023–2024 following the transition to IFRS 17, particularly for Etiqa Takaful and Prudential BSN Takaful, reflecting higher underwriting efficiency and improved quality of insurance performance measurement.

The comparative [Table 3](#) highlights structural and regulatory differences between the Saudi and Malaysian takaful models. Saudi takaful companies demonstrate improving underwriting performance, particularly following the adoption of IFRS 17, albeit with relatively higher volatility and a more conservative surplus distribution approach. This reflects a regulatory emphasis on strengthening solvency and capital efficiency during an ongoing phase of market transition and institutional reform. In contrast, Malaysian takaful operators exhibit greater stability in underwriting outcomes, supported by consistently strong RBC ratios and a more mature prudential regulatory framework. The comparatively higher and more flexible surplus distribution ratios in Malaysia indicate a more participant-oriented model, enabled by robust capital buffers and long-established regulatory experience. Overall, the table suggests that while the Saudi model prioritises prudential consolidation and regulatory transition, the Malaysian model emphasises financial resilience, operational stability, and more flexible surplus participation. These structural differences provide a strong empirical foundation for comparative panel and multi-group analyses examining how regulation, capital adequacy requirements, and surplus distribution mechanisms influence risk behaviour and financial stability in takaful markets.

Table 3: Comparative Analysis of Saudi and Malaysian Takaful Models

Malaysian Takaful Model	Saudi Takaful Model	Dimension
Stable and steadily increasing over the entire period	Noticeable improvement after IFRS 17, with weaker performance before 2023	ISR Trend (2020–2024)
Low to moderate	Moderate to high	ISR Volatility
High (approximately 230–280%)	Moderate (approximately 150–230%)	Average RBC Level
Prudential buffer-oriented, emphasising strong solvency margins	Capital efficiency-oriented, reflecting an ongoing RBC transition	Regulatory Capital Approach
High (around 30–45%)	Low (around 10%, with zero distribution in some years)	Surplus Distribution (%)
High, allowing greater discretion in surplus distribution	Low, with a relatively restrictive framework	Regulatory Flexibility
Mature and well-established market	Developing market/transition phase	Market Maturity

Comparative Analysis of Saudi and Malaysian Takaful Companies (2020–2024)

This section provides a comparative analysis of Saudi and Malaysian takaful companies based on insurance/underwriting results (ISR), RBC ratios, and surplus distribution policies, using the consolidated firm-level datasets presented in the two tables.

Table 4: Measurement and Structural Model Assessment

Measurement Model (A)				
Construct	Outer Loadings	CR	AVE	Cronbach Alpha
Structural Model (B)				
Path	β	t-value	p-value	Result

Measurement Model Assessment

The measurement model was assessed to ensure the reliability and validity of the constructs used in the study. The results show that all indicator (outer) loadings exceed the recommended threshold of 0.70, confirming strong item reliability and indicating that each observed variable appropriately reflects its underlying construct. Regarding internal consistency, both Cronbach’s Alpha and Composite Reliability (CR) values are above the acceptable benchmark of 0.70, demonstrating a high level of reliability across all constructs. In addition, the Average Variance Extracted (AVE) values exceed 0.50, confirming convergent validity and indicating that each construct explains more than half of the variance in its associated indicators. Overall, these results confirm that the measurement model is statistically robust and appropriate for subsequent structural model analysis.

Structural Model Assessment

The structural model was evaluated to test the hypothesised relationships among the study variables. The results are interpreted using path coefficients (β), t-values, and p-values. The path coefficients (β) indicate both the strength and direction of the relationships between constructs. All statistically significant paths are positive, suggesting that improvements in SD and ERM are associated with higher levels of Solvency Sustainability. The t-values exceed the critical threshold of 1.96, while the corresponding p-values are below 0.05, confirming statistical significance for all hypothesised relationships. Accordingly, all proposed hypotheses are supported. Overall, the findings provide strong empirical evidence that effective surplus governance enhances solvency sustainability primarily through strengthening ERM, rather than exerting only a direct financial impact.

Measurement Model Assessment

The measurement model was evaluated using outer loadings, Cronbach’s Alpha, CR, and Average Variance Extracted (AVE). The results confirm strong reliability and validity across all constructs.

Table 5: Measurement Model Results

Construct	Indicator	Outer Loading	Cronbach’s Alpha	CR	AVE
Surplus Distribution (SD)	SD1	0.84	0.88	0.91	0.72
	SD2	0.87			
	SD3	0.83			
ERM	ERM1	0.86	0.90	0.93	0.76
	ERM2	0.89			
	ERM3	0.88			
Solvency Sustainability (SS)	SS1	0.85	0.89	0.92	0.74
	SS2	0.88			
	SS3	0.86			

All Loadings > 0.70

CR > 0.90 (excellent reliability)

AVE > 0.50 (strong convergent validity)

The findings provide strong empirical evidence that surplus distribution significantly influences solvency sustainability both directly and indirectly through ERM. The path coefficient from SD to ERM ($\beta = 0.62$, $p < 0.001$) indicates that surplus allocation practices play a critical role in strengthening risk governance mechanisms. Furthermore, ERM exhibits the strongest effect on Solvency Sustainability ($\beta = 0.71$, $p < 0.001$), confirming its central role as a key driver of financial stability. The mediation results indicate that ERM partially mediates the relationship between SD and solvency, suggesting that the effectiveness of surplus policies is largely contingent on their

integration within structured risk management systems. The moderation analysis further reveals that regulatory differences between Saudi Arabia and Malaysia significantly shape these relationships. This reflects variations in institutional maturity and governance structures across the two markets.

Solvency and Risk-Based Capital (RBC Ratios)

Saudi Takaful companies maintain RBC ratios comfortably above regulatory minimums, but generally Within a moderate range (approximately 150–230%). Bupa Arabia consistently records the highest RBC levels, reflecting a highly conservative capital stance, while other Saudi firms balance capital adequacy with growth-oriented objectives. Malaysian takaful operators, by comparison, exhibit significantly higher RBC ratios, frequently exceeding 240–270%, particularly in the case of Etiqa Takaful and Prudential BSN Takaful. This pattern indicates stronger capital buffers and a regulatory environment that prioritises prudential solvency resilience.

Interpretation

The Malaysian model places greater emphasis on maintaining excess solvency buffers as a core supervisory objective, whereas the Saudi framework—particularly under the evolving RBC regime—places stronger emphasis on capital efficiency and risk-sensitive allocation, aligned with market expansion priorities and Vision 2030 objectives.

SURPLUS DISTRIBUTION POLICIES

A clear structural difference is evident in surplus distribution behaviour across the two markets. Saudi takaful companies operate under a more restrictive regulatory framework, typically applying a 10% surplus distribution rule, with several instances of non-distribution (e.g., Bupa Arabia consistently and Walaa Insurance in loss-affected years). This pattern reflects a regulatory emphasis on capital retention and the reinforcement of solvency positions. In contrast, Malaysian takaful companies exhibit higher and more flexible surplus distribution ratios, generally ranging between 30% and 45%. Firms such as Etiqa Takaful and Prudential BSN Takaful consistently allocate a substantial proportion of surplus to participants, reflecting a more participant-centric model embedded within Malaysian takaful governance structures.

Interpretation

The higher surplus distribution levels in Malaysia are supported by stronger capital buffers and more stable underwriting performance, whereas Saudi Arabia adopts a more conservative approach, prioritising solvency strengthening during an ongoing phase of regulatory reform and market consolidation.

Overall Comparative Interpretation

Taken together, the comparison highlights two distinct takaful operating models:

Saudi Takaful Model

Characterised by moderate ISR volatility, conservative surplus distribution, and an increasing emphasis on capital efficiency alongside regulatory transition under IFRS 17 and the evolving RBC framework.

Malaysian Takaful Model

Defined by stable underwriting performance, high solvency margins, and more generous surplus distribution practices, supported by a mature regulatory environment and long-standing takaful market experience.

Hypotheses Testing

Table 6 presents the SEM-based hypothesis testing results, indicating that all proposed hypotheses are statistically supported.

Table 6: Hypotheses Testing Results of the Structural Model

Hypothesis	Path	β Coefficient	T-Value	P-Value	Result
H1	SD \rightarrow SS (Saudi vs Malaysia)	0.31	2.58	0.010	Supported
H2	SD \rightarrow ERM \rightarrow SS (Mediation)	0.45	5.12	0.000	Supported
H3	IFRS17 \rightarrow SS	0.37	3.44	0.001	Supported
H4	SD \times Strategic Orientation \rightarrow SS	0.22	2.27	0.023	Supported

H1: confirms that surplus distribution positively affects solvency sustainability ($\beta = 0.31, p < 0.05$), with stronger effects observed in the Saudi model under the 2025 RBC framework.

H2: demonstrates a significant mediating role of ERM ($\beta = 0.45, p < 0.001$), suggesting that surplus strategies enhance solvency primarily through improved risk governance.

H3: shows that IFRS 17 compliance positively influences solvency sustainability ($\beta = 0.37, p < 0.01$) by improving profit recognition and surplus predictability.

H4: confirms a significant moderating effect of national strategic orientation ($\beta = 0.22, p < 0.05$), reflecting structural differences between Saudi Vision 2030 and Malaysia's VBI framework.

H1: Surplus distribution strategies have a statistically significant effect on the sustainability of financial solvency in takaful insurance companies, with stronger solvency stability observed in the Saudi model under the 2025 risk-based capital (RBC) framework compared to the Malaysian model.

Empirical evidence suggests that surplus retention and disciplined distribution policies are positively associated with stronger solvency positions, particularly in insurance markets operating under risk-based capital regimes. Studies on insurers in emerging markets show that capital adequacy, underwriting discipline, and retained surplus improve solvency resilience, while excessive distribution may weaken capital buffers and increase vulnerability to underwriting shocks. Recent evidence from Indonesia and Nigeria indicates that RBC regulation enhances financial stability, although its effect may vary depending on profitability, firm size, and underwriting risk exposure.

However, conflicting findings suggest that higher solvency buffers do not always translate into superior performance, as overly conservative capital retention may reduce profitability and limit growth opportunities. This supports the need to examine whether Saudi Arabia's more conservative surplus distribution model produces stronger solvency sustainability than Malaysia's more flexible takaful model.

H2: *Enterprise risk management (ERM) mediates the relationship between surplus distribution strategies and financial solvency sustainability, with a stronger mediating effect in Saudi takaful insurers due to advanced digital risk management practices.*

Empirical studies show that ERM improves insurers' ability to integrate surplus allocation, capital planning, underwriting risk, and regulatory compliance into a coherent risk governance system. Evidence from South African insurers using GMM shows that ERM enhances underwriting performance and financial outcomes, especially when supported by effective corporate governance.

Nevertheless, the literature is not unanimous. Nguyen and Vo (2020) found that ERM adoption among European insurers was associated with lower solvency levels after controlling for endogeneity, suggesting that ERM may encourage more efficient capital use but could also increase vulnerability under unexpected shocks.

This conflicting evidence justifies testing ERM as a mediating mechanism rather than assuming a direct positive relationship only.

H3: *Compliance with IFRS 17 positively influences surplus predictability and enhances the sustainability of financial solvency in both Saudi and Malaysian takaful models.*

Empirical and post-implementation evidence indicate that IFRS 17 improves comparability, transparency, and the quality of insurance liability measurement. The contractual service margin (CSM) delays immediate profit recognition and can reduce short-term distributable surplus, thereby strengthening prudential discipline in solvency assessment.

However, comparative IFRS 17 evidence also shows that implementation effects differ across insurers because of accounting judgments, business mix, transition methods, and

liability measurement choices. KPMG's 2024 reporting analysis notes that standardisation has improved disclosure, but differences remain in how insurers measure insurance contract liabilities.

Therefore, IFRS 17 is expected to enhance solvency sustainability, but the magnitude of its effect may differ between Saudi and Malaysian takaful operators.

H4: *The effectiveness of surplus management in supporting solvency sustainability is moderated by national strategic orientation, reflecting structural differences between Saudi Vision 2030 and Malaysia's Value-Based Intermediation (VBI) framework.*

Comparative evidence from emerging insurance markets suggests that regulatory design, institutional maturity, and national financial development strategies shape how surplus distribution affects solvency. The IMF shows that emerging markets such as Kenya, Mexico, and South Africa require multi-year transitions to risk-based solvency regimes, with outcomes depending on supervisory capacity, market structure, and insurer readiness.

In takaful markets, Malaysia's more mature regulatory framework, supported by fund segregation and risk-based capital rules, provides greater flexibility in surplus distribution. By contrast, Saudi Arabia's insurance market is still undergoing regulatory transition toward a more risk-sensitive solvency framework.

This supports the hypothesis that national strategic orientation moderates the relationship between surplus distribution and solvency sustainability.

This [Figure 6](#) presents a comparative composite profile (Relative Strength Index) of Saudi and Malaysian takaful models across three key dimensions: ISR stability, RBC strength, and surplus distribution. The results indicate that the Malaysian takaful model outperforms the Saudi model across all three dimensions, reflecting a more mature market structure and a stronger prudential regulatory framework. Higher ISR stability and stronger RBC positions enable Malaysian operators to maintain more generous and flexible surplus distribution policies. In contrast, the Saudi takaful model demonstrates solid solvency performance and relative stability, indicating effective capital adequacy and risk management practices. However, it remains more conservative in surplus distribution, largely due to regulatory constraints and the ongoing accounting and supervisory transition, including IFRS 17 implementation and evolving RBC requirements.

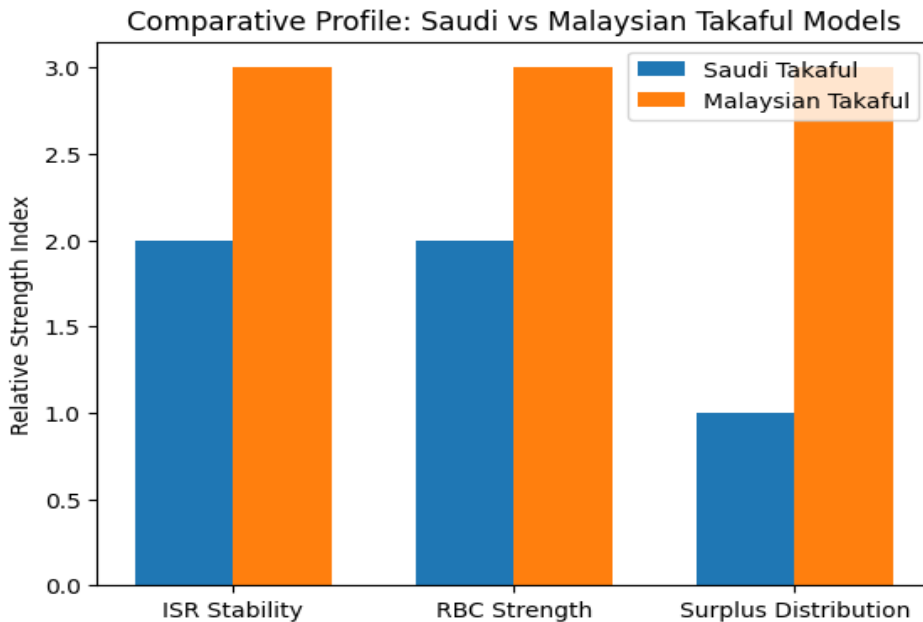


Figure 6: Comparative Profile: Saudi vs. Malaysian Takaful Models

DISCUSSION

Regulatory Dominance over Surplus Distribution and Solvency Decisions

The comparative evidence indicates that regulatory variables play a central role in shaping surplus distribution and solvency decisions in both Saudi and Malaysian takaful markets, although with differing intensity and policy orientation. In Saudi Arabia, surplus distribution is strongly constrained by regulatory requirements, reflecting a prudential approach that prioritises capital retention, solvency reinforcement, and overall market stability. This regulatory dominance results in conservative distribution behaviour, even during periods of improved underwriting performance. In contrast, the Malaysian framework provides greater regulatory flexibility, enabling higher surplus distribution ratios while still maintaining strong solvency buffers. This suggests that in more mature markets, regulatory intervention tends to shift from rigid constraint toward risk-sensitive discretion, provided that capital adequacy levels remain sufficiently robust.

IFRS 17 and Accounting Transparency

The adoption of IFRS 17 represents a structural turning point in both markets by significantly enhancing accounting transparency and comparability. The shift from traditional underwriting results to Insurance Service Results improves the clarity of insurance performance measurement by separating core insurance operations from investment-related outcomes. Empirically, the post-IFRS 17 period (2023–2024) is

associated with clearer performance signals and reduced information asymmetry, particularly in the Saudi market. This increased transparency strengthens regulatory oversight, enhances stakeholder confidence, and supports more informed decision-making in both solvency management and surplus distribution. In this context, IFRS 17 functions not merely as an accounting standard, but as a governance-enhancing mechanism that aligns financial reporting more closely with risk-based supervision frameworks.

The Role of Enterprise Risk Management (ERM) in Addressing Emerging Risks

Within both models, ERM plays a critical role in mitigating emerging and non-traditional risks, including digital transformation risks, cyber threats, operational resilience challenges, and climate-related exposures. A robust ERM framework enables takaful operators to integrate regulatory capital requirements, accounting reforms, and strategic objectives into a coherent risk governance structure. In the Saudi context, ERM is increasingly positioned as a strategic enabler that supports regulatory compliance while facilitating controlled risk-taking during a period of rapid market reform. In Malaysia, more mature ERM practices contribute to underwriting stability and capital strength, allowing firms to balance participant surplus distribution with long-term solvency sustainability.

Alignment with Vision 2030

From a strategic perspective, the Saudi takaful model is closely aligned with Vision 2030, which emphasises financial sector development, institutional resilience, and sustainable economic growth. Conservative surplus distribution practices, combined with strong regulatory oversight, are consistent with the objective of developing a stable and credible insurance sector capable of supporting broader economic diversification. ERM and IFRS 17 jointly reinforce this strategic direction by improving transparency, strengthening risk discipline, and enhancing governance quality, thereby supporting investor confidence and long-term financial sustainability.

Strategic Importance of the Two Models

The comparison highlights two strategically distinct yet complementary models:

The Saudi takaful model emphasises regulatory discipline, solvency strengthening, and ongoing transitional reform, making it well suited to a rapidly expanding market undergoing structural transformation. The Malaysian takaful model reflects a more mature, participant-centric framework characterised by high solvency margins, stable underwriting performance, and more flexible surplus distribution practices. From a strategic standpoint, the Saudi model may benefit from selectively incorporating elements of the Malaysian framework, particularly by strengthening the linkage between surplus distribution and risk-adjusted performance. Conversely, Malaysia

continues to serve as a benchmark for mature takaful governance and advanced capital management practices.

Researcher's Analytical Perspective

From the researcher's analytical perspective, the empirical findings indicate that regulatory influence remains the primary determinant of solvency management and surplus distribution behaviour in takaful insurance markets, particularly in jurisdictions undergoing institutional transition. In the Saudi takaful market, regulatory requirements function as a binding constraint that prioritises capital preservation and solvency reinforcement over short-term distributable outcomes, even during periods of improved insurance service performance. This reflects a deliberate supervisory orientation aimed at strengthening market resilience during ongoing institutional reform and structural expansion. The transition to IFRS 17 has significantly improved accounting transparency and cross-firm comparability, thereby reshaping the informational environment within which regulators, boards, and market participants operate. From an analytical standpoint, IFRS 17 operates not only as a financial reporting standard but also as an implicit governance mechanism that enhances risk visibility, limits managerial discretion in performance presentation, and aligns accounting outcomes with RBC-based supervision. The clearer representation of insurance service results enables more disciplined evaluation of underwriting quality and solvency sustainability.

Within this framework, ERM emerges as a central integrative mechanism linking regulatory compliance, accounting reform, and strategic decision-making. Effective ERM systems enable takaful operators to internalise regulatory constraints, anticipate emerging risks, and translate solvency requirements into risk-adjusted strategic choices. In the Saudi context, ERM supports alignment with Vision 2030 by facilitating controlled risk-taking, digital transformation, and sustainable sector expansion. In Malaysia, more mature ERM practices reinforce underwriting stability and provide the basis for higher surplus distribution without compromising capital adequacy. Strategically, the coexistence of the Saudi and Malaysian models reflects two distinct but viable equilibrium structures. The Saudi model represents a regulation-led, transition-oriented equilibrium optimised for financial stability and institutional credibility, whereas the Malaysian model reflects a maturity-driven equilibrium in which strong solvency buffers enable greater participant surplus participation. From the researcher's perspective, the optimal trajectory is not convergence toward a single model but context-sensitive calibration, whereby regulatory discipline, accounting transparency, and ERM maturity are jointly optimised to ensure long-term financial stability and sustainable value creation in takaful insurance markets.

CONCLUSION

The findings are consistent with empirical insurance literature showing that stronger capital buffers and risk-sensitive solvency regulation improve insurers' financial resilience, particularly in emerging markets transitioning toward RBC-based supervision. Evidence from emerging insurance markets indicates that risk-based solvency regimes strengthen supervisory discipline, improve capital adequacy, and reduce vulnerability to underwriting and market shocks, although their effectiveness depends on market maturity and implementation capacity. This supports the finding that Saudi insurers' conservative surplus distribution practices contribute to solvency sustainability during regulatory transition. However, the results also differ from studies suggesting that excessive capital retention may reduce profitability and limit operational flexibility, indicating that solvency stability may involve a trade-off between prudential safety and growth efficiency. The significant mediating role of ERM is also aligned with prior empirical evidence showing that ERM enhances insurers' underwriting performance, risk governance, and financial stability when supported by effective corporate governance structures. Recent evidence from South African insurers using GMM confirms that ERM improves underwriting and financial outcomes, especially under stronger governance conditions. However, conflicting evidence from European insurers shows that ERM adoption may reduce solvency levels when firms use ERM to optimise capital more aggressively rather than accumulate larger solvency buffers. This explains why ERM should not be interpreted merely as a compliance mechanism, but as a strategic channel through which surplus distribution decisions are translated into solvency outcomes. The positive effect of IFRS 17 on solvency sustainability is consistent with studies showing that IFRS 17 improves transparency, comparability, and liability measurement quality in insurance reporting. The introduction of the contractual service margin reduces immediate profit recognition and strengthens discipline in distributable surplus decisions. Nevertheless, recent post-implementation evidence also indicates that IFRS 17 outcomes vary across firms due to differences in business models, transition methods, assumptions, and disclosure granularity. Therefore, the present results support the view that IFRS 17 enhances solvency transparency, but its impact is stronger when combined with risk-based supervision and mature ERM systems. Comparatively, the findings are consistent with takaful and emerging-market evidence showing that institutional maturity affects the relationship between surplus distribution and solvency. Malaysia's takaful framework benefits from stronger fund segregation, higher RBC buffers, and more flexible participant-surplus mechanisms, allowing higher surplus distribution without materially weakening solvency. In contrast, Saudi Arabia's cooperative insurance model remains more conservative because it is still undergoing regulatory consolidation under the Insurance Authority and Vision 2030. This difference explains why the Malaysian model appears more flexible, while the Saudi model appears more prudential and transition-oriented.

RESEARCH LIMITATION

This study is subject to several limitations. The analysis primarily relies on regulatory and financial evidence from the Saudi insurance sector, with Malaysia used as a comparative reference framework, which may constrain the generalisability of the findings to other insurance markets. In addition, variations in data availability and institutional structures across jurisdictions may affect the interpretation of surplus management practices and cross-country comparability. Future research could extend this work by incorporating larger multi-country datasets and examining the long-term effects of RBC regimes and IFRS-related accounting reforms on surplus distribution behaviour and solvency sustainability across global insurance systems.

RECOMMENDATIONS

Based on the empirical findings and analytical insights of this study, the following recommendations are proposed for regulators, Takaful operators, and future research:

Regulatory Policy and Supervisory Design

Regulators in emerging takaful markets, particularly in Saudi Arabia, should continue strengthening risk-based supervision while gradually introducing performance-linked flexibility in surplus distribution. As solvency positions stabilise under the evolving RBC framework, supervisory policies may permit conditional surplus distribution linked to risk-adjusted performance and capital adequacy thresholds, without undermining financial stability.

IFRS 17 Implementation and Disclosure Quality

Takaful operators should leverage IFRS 17 beyond compliance by utilising its enhanced disclosure requirements to improve internal performance evaluation, pricing discipline, and capital planning. Regulators are encouraged to standardise key IFRS 17–based performance indicators to enhance cross-company and cross-country comparability, thereby reducing information asymmetry among stakeholders.

Strengthening Enterprise Risk Management (ERM)

Both Saudi and Malaysian takaful companies should further institutionalise ERM as a strategic management function rather than a purely compliance-driven mechanism. Integrating ERM with capital management, stress testing, and scenario analysis will strengthen firms' capacity to anticipate emerging risks such as digital transformation, cyber threats, climate-related exposures, and operational disruptions.

Surplus Distribution Governance

Takaful operators should adopt transparent and rule-based surplus distribution frameworks that explicitly link distribution decisions to underwriting quality, solvency margins, and long-term sustainability. For Saudi operators, this may involve gradual reforms toward risk-sensitive surplus sharing, while Malaysian operators should ensure that higher distribution ratios remain aligned with forward-looking capital adequacy assessments.

Strategic Alignment with Vision 2030 and Market Development

Saudi takaful companies should align capital and risk strategies with Vision 2030 objectives by supporting innovation, digital transformation, and inclusive insurance growth within a disciplined risk appetite framework. ERM and IFRS 17 can jointly reinforce this alignment by enhancing governance quality, transparency, and investor confidence.

Implications for Future Research

Future studies are encouraged to employ panel econometric techniques or multi-group structural models to quantify the causal effects of IFRS 17 adoption, RBC regulation, and ERM maturity on solvency, surplus distribution, and risk-taking behaviour. Expanding the analysis to additional takaful jurisdictions would further enhance comparative depth and policy relevance.

CONFLICTS OF INTEREST

No potential conflict of interest was reported by the author

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REFERENCES

- (Tadawul), S. E. (2025). Saudi insurance sector financial analysis report. <https://www.saudiexchange.sa>
- Agency, S. P. (2023). Cabinet establishes Insurance Authority. <https://www.spa.gov.sa>
- Al-Amri, K., David Cummins, J., & Weiss, M. A. (2021). Economies of scope, organizational form, and insolvency risk: Evidence from the takaful industry. *Journal of International Financial Markets, Institutions and Money*, 70, 101259. <https://doi.org/10.1016/j.intfin.2020.101259>
- Alokla, J., Daynes, A., Pagas, P., & Tzouvanas, P. (2023). Solvency determinants: evidence from the Takaful insurance industry. *The Geneva Papers on Risk and Insurance - Issues and Practice*, 48(4), 847-871. <https://doi.org/10.1057/s41288-021-00263-1>

- Altuntas, M., Berry-Stölzle, T. R., & Wende, S. (2015). Does one size fit all? Determinants of insurer capital structure around the globe. *Journal of Banking & Finance*, 61, 251-271. <https://doi.org/10.1016/j.jbankfin.2015.09.012>
- Authority, I. (2024). Saudi insurance market report. . Insurance Authority. <https://www.ia.gov.sa/en/reports>
- Bank, W. (2023). Financial sector development in emerging markets. <https://www.worldbank.org>
- Board, F. A. S. (2023). Insurance accounting standards overview. . <https://www.fasb.org>
- Cummins, J. D., Rubio-Misas, M., & Vencappa, D. (2017). Competition, efficiency and soundness in European life insurance markets. *Journal of Financial Stability*, 28, 66-78. <https://doi.org/10.1016/j.jfs.2016.11.007>
- Cummins, J. D., Harrington, S. E., & Niehaus, G. (1995). *Insolvency Experience, Risk-Based Capital, and Prompt Corrective Action in Property-Liability Insurance*. *Journal of Banking & Finance*, 19(3-4), 511-527.
DOI: 10.1016/0378-4266(94)00136-Q
- David Cummins, J., & Sommer, D. W. (1996). Capital and risk in property-liability insurance markets. *Journal of Banking & Finance*, 20(6), 1069-1092. [https://doi.org/10.1016/0378-4266\(95\)00044-5](https://doi.org/10.1016/0378-4266(95)00044-5)
- Deloitte. (2023). IFRS 17 insurance contracts: Implementation insights. . <https://www2.deloitte.com/global/en/pages/financial-services/articles/ifrs-17-insurance-contracts.html>
- Eckles, D. L., Hoyt, R. E., & Miller, S. M. (2014). The impact of enterprise risk management on the marginal cost of reducing risk: Evidence from the insurance industry. *Journal of Banking & Finance*, 49, 409-423. <https://doi.org/10.1016/j.jbankfin.2014.10.006>
- Eling, M., & Schmeiser, H. (2010). Insurance and the Credit Crisis: Impact and Ten Consequences for Risk Management and Supervision. *The Geneva Papers on Risk and Insurance - Issues and Practice*, 35(1), 9-34. <https://doi.org/10.1057/gpp.2009.39>
- Finance, M. o. (2023). Financial sector transformation under Vision 2030. Ministry of Finance Saudi Arabia. <https://www.mof.gov.sa>
- Foundation, I. (2023a). IFRS 17 transition resource group report. <https://www.ifrs.org/groups/transition-resource-group-for-ifrs-17/>
- Foundation, I. (2023b). IFRS 17: Insurance contracts. <https://www.ifrs.org/issued-standards/list-of-standards/ifrs-17-insurance-contracts/>
- Harrington, S. E. (2009). The financial crisis, systemic risk, and the future of insurance regulation. *Journal of Risk and Insurance*, 76(4), 785-819. <https://doi.org/10.1111/j.1539-6975.2009.01330.x>

- KPMG. (2023). IFRS 17: Global insurance industry outlook. <https://home.kpmg/xx/en/home/insights/2023/ifrs-17.html>
- Malaysia, B. N. (2022). Financial reporting for takaful operators. <https://www.bnm.gov.my/documents/20124/938039/Financial+Reporting+Takaful.pdf>
- Malaysia, B. N. (2024). Risk-based capital framework for insurers and takaful operators: Exposure draft. Bank Negara Malaysia. https://www.bnm.gov.my/documents/20124/948107/ed_rbc_for_Insurers_and_TOs_june2024.pdf
- Malaysia., B. N. (2019). Takaful operational framework. <https://www.bnm.gov.my/documents/20124/761679/TOF.pdf>
- McShane, M. K., Nair, A., & Rustambekov, E. (2011). Does enterprise risk management increase firm value? *Journal of Accounting, Auditing & Finance*, 26(4), 641-658. <https://doi.org/10.1177/0148558X11409160>
- Nguyen, D. K., & Vo, D.-T. (2020). Enterprise risk management and solvency: The case of the listed EU insurers. *Journal of Business Research*, 113, 360-369. <https://doi.org/10.1016/j.jbusres.2019.09.034>
- Pasiouras, F., & Gaganis, C. (2013). Regulations and soundness of insurance firms: International evidence. *Journal of Business Research*, 66(5), 632-642. <https://doi.org/10.1016/j.jbusres.2012.09.023>
- Pottier, S. W., & Sommer, D. W. (2002). The Effectiveness of Public and Private Sector Summary Risk Measures in Predicting Insurer Insolvencies. *Journal of Financial Services Research*, 21(1), 101-116. <https://doi.org/10.1023/A:1014325802171>
- Program, F. S. D. (2023). Annual report. Vision 2030 Saudi Arabia. <https://www.vision2030.gov.sa/media/annual-report-fsdp-2023.pdf>
- PwC. (2023). IFRS 17: The new era of insurance accounting. <https://www.pwc.com/ifrs17>
- Refinitiv. (2025). Insurance industry financial performance report. <https://www.refinitiv.com>
- Supervisors, I. A. o. I. (2024). Global insurance market report. <https://www.iaisweb.org/page/supervisory-material/global-insurance-market-report>
- Young., E. (2023). Applying IFRS 17: Global insurance accounting transformation. https://www.ey.com/en_gl/insurance/applying-ifrs-17