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DIGITAL TRANSFORMATION AND FINANCIAL SUSTAINABILITY OF THE INSURANCE MARKET: EVIDENCE FROM UZBEKISTAN

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Abstract: This article investigates how digital transformation can strengthen the financial sustainability of the insurance market in Uzbekistan. The study combines descriptive statistics, ratio analysis, comparative analysis and institutional review. Official data of the National Agency for Prospective Projects and the Central Bank of the Republic of Uzbekistan are used together with international evidence from the Swiss Re Institute and OECD-oriented digitalisation research. Uzbekistan's insurance market has expanded rapidly: in 2024 insurers collected UZS 9.8 trillion in premiums, paid UZS 2.2 trillion in claims and held UZS 11.8 trillion in aggregate assets. In the first half of 2025, premiums reached UZS 6.2 trillion, 46% above the corresponding period of 2024, while insurance payments increased by 12% to UZS 1.2 trillion. Insurers' investments reached UZS 8.3 trillion as of 1 July 2025, up 36% year on year. The article argues that sustainable development requires more than premium growth. Digital billing, electronic claims, data-driven underwriting, automated compliance and diversified investment management can improve efficiency and resilience, but they must be accompanied by consumer protection, cybersecurity and trust. A Digital Insurance Sustainability Framework is proposed for Uzbekistan, linking digital access, operational efficiency, claims quality, investment resilience and institutional trust. The paper concludes with policy recommendations for regulators and insurers.

Keywords: insurance market; digital transformation; financial sustainability; InsurTech; insurance premiums; claims; investment portfolio; Uzb*ekistan.*

JEL Classification: G22, G23, O33, C43.

1. Introduction

Digital transformation is changing the economic model of insurance. Online distribution, mobile applications, automated underwriting, electronic claims, artificial intelligence, cloud technologies and data analytics are gradually replacing fragmented manual processes with integrated digital workflows. For emerging economies, this transformation is particularly important because digital channels can reduce transaction costs, widen access to insurance services and make risk protection available beyond traditional branch networks.

International evidence indicates that digital maturity is rising across both advanced and emerging markets. Swiss Re Institute's Insurance Digitalisation Index shows that more than 80% of the countries covered improved their digital access and use indicators after 2020. Emerging markets are narrowing part of the gap through faster connectivity, mobile broadband and online purchasing. At the same time, digitalisation does not automatically produce fully digital insurance: trust, advice requirements, product complexity and market-specific distribution structures continue to matter.

Uzbekistan provides a relevant case for studying this relationship. The insurance market has recently demonstrated rapid quantitative growth. According to the National Agency for Prospective

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Projects, around 10 million insurance contracts were concluded in 2024. Insurance premiums reached UZS 9.8 trillion, 21% more than in 2023, while insurance payments amounted to UZS 2.2 trillion, an increase of 9%. Aggregate assets of insurers reached UZS 11.8 trillion, growing by 24.9%.

The expansion continued in 2025. The Central Bank of Uzbekistan reported that insurance premiums in the first half of 2025 reached UZS 6.2 trillion, representing 46% year-on-year growth. Insurance payments rose by 12% to UZS 1.2 trillion. Insurers' total investments amounted to UZS 8.3 trillion as of 1 July 2025, 36% higher than a year earlier. Deposits represented 61% of the investment portfolio, while real-estate investments reached UZS 1.6 trillion.

Rapid premium growth, however, is not synonymous with financial sustainability. Sustainable insurance development also depends on claims-paying capacity, the quality of underwriting, investment diversification, operational efficiency, solvency, consumer confidence and the ability to manage new risks. Digital transformation can support these dimensions, but it can also introduce cyber, data-protection and technology-concentration risks. This makes the interaction between digitalisation and financial sustainability an important research issue for Uzbekistan.

The purpose of this study is to assess recent structural changes in Uzbekistan's insurance market and to develop a framework explaining how digital transformation can contribute to its long-term financial sustainability. The research addresses three questions: (1) what do recent market indicators reveal about the scale and structure of insurance growth; (2) through which channels can digitalisation influence financial sustainability; and (3) what policy and managerial measures can strengthen the positive effects of digital transformation?

2. Literature Review

The economic literature traditionally views insurance as a mechanism for risk transfer, household and business resilience, and long-term financial intermediation. A financially sustainable insurer must be able to price risk adequately, meet claims obligations, preserve capital and invest accumulated premiums prudently. In this framework, premium growth is desirable only when it is supported by adequate reserves, sound underwriting and reliable claims settlement.

The digitalisation literature adds an operational and informational dimension to this framework. Digital technologies reduce information-processing costs and can improve risk classification, fraud detection, customer service and claims management. Standardised activities such as data collection, policy administration and post-sales communication are increasingly automated. Swiss Re has also noted that online insurance purchasing is already common in both advanced and emerging markets, although complex products continue to require advice and trust-based intermediation.

For emerging markets, digitalisation may have a stronger marginal effect because it can overcome geographical and transaction-cost barriers. Mobile distribution and electronic identification can expand access to previously underserved consumers. At the same time, rapid digital adoption may create new vulnerabilities. Cyber incidents, algorithmic bias, data leakage, weak digital literacy and overdependence on a small number of technology providers can undermine consumer confidence.

Recent international market research also shows that the global insurance cycle is becoming more complex. Swiss Re Institute expects global real premium growth to moderate after the strong 2025 performance, while emerging markets retain stronger structural growth potential than many advanced markets. This reinforces the need for emerging insurance systems to convert rapid expansion into durable institutional and financial capacity.

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For Uzbekistan, existing official reports document strong growth in premiums, assets and investments, while recent reforms are deepening digital infrastructure. From 1 April 2026, a Unified Insurance Billing System was introduced for centralised accounting of premium payments for policies issued through the unified insurance information system. Electronic submission of insurance claims has also been introduced through the national interactive public-services infrastructure. These changes create a foundation for a more integrated digital insurance ecosystem.

The research gap lies in connecting these two processes. Market growth and digital reforms are often discussed separately. This study treats them as interdependent and asks whether digital transformation can improve not only sales volumes but also the quality, efficiency and resilience of insurance intermediation.

3. Research Methodology

The study applies a mixed analytical design based on descriptive statistics, growth-rate analysis, financial ratios, comparative institutional analysis and synthesis of international practice. The principal national sources are official insurance-market statistics published by the National Agency for Prospective Projects and the Financial Stability Report of the Central Bank of Uzbekistan. International comparison and conceptual interpretation draw on Swiss Re Institute publications.

Three groups of indicators are used. The first group measures market scale: gross insurance premiums, insurance payments, number of contracts and aggregate assets. The second group measures financial capacity: insurers' investments, investment structure and the claims-to-premiums ratio. The third group covers digital and institutional transformation: electronic policy administration, centralised billing, electronic claims, data integration and digital customer access.

The claims-to-premiums ratio is used as a simple descriptive indicator:

$$\text{CPR} = \text{Insurance payments} / \text{Insurance premiums} \times 100$$

The ratio is not interpreted as a stand-alone measure of profitability because premium and claims timing, product mix and reserving practices differ across insurers. It is used only to describe the relationship between current market inflows and reported insurance payments. Growth rates are calculated as the percentage change from the corresponding previous period.

Because complete firm-level digitalisation indicators are not publicly available for a sufficiently long time series, the article does not claim a causal econometric estimate. Instead, it proposes a structured analytical framework that can later be tested with company-level panel data. This limitation is important for avoiding overstatement of the empirical evidence.

4. Results and Discussion

4.1. Recent development of Uzbekistan's insurance market

Indicator	2024	Growth vs. 2023	H1 2025	H1 2025 growth
Insurance premiums	UZS 9.8 tn	+21%	UZS 6.2 tn	+46% y/y
Insurance payments	UZS 2.2 tn	+9%	UZS 1.2 tn	+12% y/y
Aggregate assets	UZS 11.8 tn	+24.9%	—	—
Insurers'	—	—	UZS 8.3 tn	+36% y/y

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investments				
Insurance contracts	~10 million	—	—	—

Table 1. Selected indicators of the insurance market of Uzbekistan. Source: National Agency for Prospective Projects; Central Bank of Uzbekistan.

The data reveal three important features. First, premium growth is substantially faster than the growth of insurance payments. For 2024, the simple payments-to-premiums ratio was approximately 22.4% (2.2/9.8 × 100). For the first half of 2025, it was approximately 19.4% (1.2/6.2 × 100). These figures should not be treated as a profitability measure, but they show that premium inflows have expanded faster than reported payments in the observed periods.

Second, the asset base of the sector is expanding. Aggregate insurer assets increased by almost one quarter in 2024. This is important because financial sustainability depends on the capacity to maintain reserves, absorb shocks and invest accumulated resources.

Third, investment growth is strong but concentrated. As of 1 July 2025, deposits accounted for 61% of insurers' investment portfolios. Deposit-based investment provides liquidity and simplicity, but excessive concentration can limit diversification. The sharp increase in real-estate investment, which reached UZS 1.6 trillion, also makes asset-liability and concentration risk management increasingly important.

4.2. Digital transformation of insurance infrastructure

Uzbekistan's insurance digitalisation is moving from isolated online services toward system-level infrastructure. The introduction of a unified insurance billing mechanism in 2026 is especially important because centralised premium accounting can improve payment traceability, reconciliation and regulatory visibility. Electronic submission of claims can reduce physical paperwork, shorten communication chains and create structured data for claims analytics.

These reforms can influence financial sustainability through five channels. First, digital sales and servicing reduce administrative costs per policy. Second, structured data can improve underwriting and pricing. Third, electronic claims can accelerate settlement and improve customer experience. Fourth, integrated billing and reporting can strengthen compliance and reduce data inconsistencies. Fifth, digital records create a basis for fraud analytics and more accurate supervisory monitoring.

However, these benefits depend on institutional quality. If digitalisation simply transfers inefficient processes to an online interface, productivity gains will be limited. Sustainable digitalisation requires process redesign, interoperable data standards, cybersecurity, staff skills and clear responsibility for data quality.

4.3. Digital Insurance Sustainability Framework

Based on the evidence, this study proposes a Digital Insurance Sustainability Framework (DISF) for Uzbekistan. The framework contains five interconnected dimensions:

Dimension	Key indicators	Expected sustainability effect
Digital access	Share of policies sold/serviced digitally; mobile access; electronic identification	Lower distribution costs and broader inclusion

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Operational efficiency	Processing time; automated underwriting; cost per policy	Higher productivity and lower expense pressure
Claims quality	Electronic claims; settlement time; complaint rate; fraud analytics	Higher trust and better loss management
Financial resilience	Solvency, investment diversification, liquidity, asset-liability matching	Greater capacity to absorb shocks and pay claims
Institutional trust	Cybersecurity, data protection, disclosure, complaint resolution	Higher customer confidence and sustainable demand

Table 2. Proposed Digital Insurance Sustainability Framework (DISF). Source: developed by the author.

The framework highlights that digitalisation should not be evaluated only by the number of online policies. A market may have high digital sales but weak claims service, poor cybersecurity or concentrated investments. In that case, digital expansion would not necessarily imply greater sustainability. The proposed framework therefore combines customer-facing, operational and balance-sheet dimensions.

5. Policy and Managerial Recommendations

1. Develop a national insurance digitalisation dashboard. The regulator should gradually publish comparable indicators on electronic policies, digital claims, settlement times and customer complaints alongside conventional premium and asset statistics.

2. Use the Unified Insurance Billing System as an analytical infrastructure, not only as an accounting tool. Aggregated data can support market monitoring, anomaly detection and evidence-based supervision while respecting personal-data requirements.

3. Promote end-to-end digital claims. Electronic notification should be connected with document exchange, status tracking, settlement decisions and payment confirmation so that digitalisation improves the complete customer journey.

4. Strengthen investment diversification and asset-liability management. Rapid growth in premiums and investments should be accompanied by stronger monitoring of concentration, liquidity and duration risks.

5. Introduce minimum cyber-resilience and data-governance standards proportionate to insurer size and business model. Digital growth increases the economic value of insurance databases and therefore raises operational and reputational risk.

6. Encourage InsurTech partnerships and regulatory experimentation. Controlled pilot environments can allow insurers and technology firms to test telematics, AI-assisted underwriting, microinsurance and automated claims solutions before large-scale deployment.

7. Measure consumer trust as a financial-sustainability variable. Complaint resolution, claim settlement speed, transparency of exclusions and customer retention should be monitored together with premium growth.

6. Scientific Novelty and Practical Significance

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The scientific novelty of the article is the integration of digital transformation and financial sustainability into a single analytical framework for the insurance market of Uzbekistan. Rather than treating digitalisation as a technological objective, the proposed DISF evaluates whether digital change improves access, operating efficiency, claims quality, financial resilience and institutional trust simultaneously.

The practical significance is that the framework can be converted into a regulator-level dashboard or an insurer-level scorecard. Once firm-level data become available, the framework can also support panel-data research testing whether higher digital maturity is statistically associated with lower operating costs, faster claims settlement, stronger premium retention and more stable profitability.

7. Limitations and Directions for Further Research

The principal limitation is the absence of a long, publicly available firm-level time series on digital insurance indicators. The present study therefore relies on market-level statistics and institutional evidence and does not infer causality. Future research should construct a company-level digitalisation index and combine it with solvency, profitability, claims, expense and investment indicators. A panel model could then estimate the effect of digital maturity on financial performance while controlling for insurer size, ownership, business line and macroeconomic conditions.

8. Conclusion

Uzbekistan's insurance market is entering a new stage in which rapid quantitative expansion coincides with deeper digital reform. Premiums, assets and investments have grown strongly, while centralised billing and electronic claims infrastructure are creating new possibilities for data-driven insurance management. These developments provide a favourable basis for stronger financial intermediation and wider insurance protection.

Nevertheless, sustainable development requires a shift from a volume-oriented approach toward a quality-oriented model. Premium growth must be accompanied by reliable claims settlement, prudent investment, adequate capital, operational efficiency, cybersecurity and consumer trust. Digitalisation can support all of these objectives when it is implemented as an integrated business and regulatory transformation rather than as a narrow online-sales project.

The proposed Digital Insurance Sustainability Framework offers a practical structure for this transition. Its five dimensions—digital access, operational efficiency, claims quality, financial resilience and institutional trust—can help regulators and insurers evaluate whether technological progress is translating into genuine economic resilience. For Uzbekistan, the next phase of insurance reform should therefore focus not only on making insurance more digital, but on making digital insurance more trustworthy, financially resilient and socially useful.

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