Digital Transformation and Financial Inclusion in DGS Frameworks

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Abstract

The rapid expansion of platform-based financial intermediation is reshaping depositor relationships and challenging traditional assumptions underlying deposit guarantee systems. In digital financial ecosystems characterized by distributed data architectures, multi-entity service provision, and indirect customer relationships, formal legal coverage remains necessary but is no longer sufficient to ensure timely and reliable reimbursement. Existing analytical frameworks continue to rely predominantly on binary eligibility criteria, offering limited insight into the operational and technological capacity of deposit guarantee schemes to execute statutory protection under stress. This paper develops the Digital Deposit Inclusion Index (DDII), a multidimensional regulatory measurement framework designed to assess effective depositor protection in digitally mediated environments. The index integrates five core dimensions—legal protectability, operational readiness, data traceability, technological resilience, and depositor accessibility—into a unified supervisory architecture. It further introduces a risk-adjusted extension and an Inclusion Gap Function to capture systemic vulnerability and discrepancies between formal and effective protection. By formalizing depositor inclusion as an operational and institutional capacity rather than a legal status, the framework enables granular supervisory diagnostics, supports dynamic monitoring of institutional adaptation, and strengthens early warning and crisis management planning. The DDII is formulated as an implementable regulatory blueprint for deposit guarantee authorities and supervisory institutions with access to confidential operational and technological data. The study contributes to the literature by reframing digital financial inclusion in institutional terms and by providing a structured methodology for aligning deposit insurance governance with platform-based financial architectures. It offers concrete analytical tools for the modernization of crisis management and depositor protection regimes in the context of ongoing digital finance and CMDI reforms.

Keywords

Deposit insurance, digital finance, financial inclusion, operational resilience, crisis management.