



# Cybersecurity Threats and Mitigation Strategies in East African Financial Systems: An Eritrean Perspective

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## Abstract

Cybersecurity threats in financial systems are increasingly recognised as critical issues, especially in East Africa where technological advancements often outpace regulatory measures. A mixed-methods approach was employed, combining a structured questionnaire survey with qualitative interviews among key stakeholders in the Eritrean banking sector. The analysis revealed that Eritrea's financial sector is particularly vulnerable to phishing attacks (45%) and ransomware threats (32%), which are common cybercrimes targeting such sectors globally. Mitigation strategies should focus on improving employee cybersecurity awareness, enhancing data encryption practices, and establishing more robust incident response protocols. Financial institutions in Eritrea should prioritise investing in advanced security technologies and continuously update their cybersecurity policies to align with international best practices. Model estimation used  $\hat{\theta} = \text{argmin} \{ \theta \} \text{sumiell} ( y_i, f\theta ( \xi ) ) + \lambda | \text{Vert} \theta |$ , with performance evaluated using out-of-sample error.

**Keywords:** *Sub-Saharan, Africanization, NetworkSecurity, DataPrivacy, BlockchainTechnology, SecureProtocols, AnomalyDetection*

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