In light of growing economic uncertainty, Islamic banking institutions are increasingly adopting financial technologies (Fintech) to enhance economic resilience and sustainability. This study explores the role of Fintech in fostering innovation and economic resilience within Islamic banking through a combined bibliometric and systematic literature review. Guided by the PRISMA framework, 98 peer-reviewed articles from 2019–2025 were analyzed, with bibliometric mapping conducted using VOSviewer. The findings reveal a growing interdisciplinary nexus between Islamic finance, digital innovation, and governance, with key themes including Shariah-compliant innovation, financial inclusion, and crisis resilience. Technologies such as blockchain, AI, and mobile banking have enhanced operational efficiency, customer engagement, and ethical compliance. However, regulatory fragmentation, cybersecurity risks, and Shariah harmonization remain persistent challenges. The study offers strategic recommendations for policymakers, financial institutions, and researchers, emphasizing adaptive regulation, user-centric innovation, and inclusive digital infrastructure. By integrating Islamic ethical principles with digital transformation, this review provides original insights into how Islamic fintech can support sustainable, inclusive, and resilient financial ecosystems globally.