



ISSN Online: 3006-4708

ISSN Print: 3006-4694

SOCIAL SCIENCE REVIEW ARCHIVES

<https://policyjournalofms.com>

Analysis of Legal Mechanisms for Regulating Mobile Banking Applications and Digital Financial Services in Pakistan

Abdul Basit¹, Ali Raza Laghari*², Akhtar Ali Ansari³, Muhammad Asif Chohan⁴

¹ Lecturer, Department of Law, University of Southern Punjab, Multan, Pakistan.

Email: abdulbasit@usp.edu.pk

² Lecturer, Department of Law, University of Southern Punjab, Multan, Pakistan .

*Corresponding Author Email: Laghari.aliraza20@gmail.com

³ LL.M, University of Lahore (UOL). Email: akhtaraliansariadv@gmail.com

⁴ Visiting Lecturer, Post Graduate School of Legal Study, Punjab University (PU), Law College, Lahore.

Email: aasif147@yahoo.com

DOI: <https://doi.org/10.70670/sra.v4i1.1903>

Abstract

Pakistan's digital financial landscape has undergone a remarkable transformation between 2020 and 2025, with mobile banking application users growing from approximately 15 million to over 84 million and digital transaction values rising from USD 42 billion to an estimated USD 445 billion annually. This rapid expansion has outpaced the development of a coherent, comprehensive legal framework capable of addressing the multidimensional regulatory challenges that mobile banking and digital financial services present. This research article examines the legal mechanisms through which Pakistani regulatory authorities, primarily the State Bank of Pakistan (SBP), the Securities and Exchange Commission of Pakistan (SECP), and the Pakistan Telecommunication Authority (PTA), seek to govern mobile banking applications and digital financial services. Drawing on primary regulatory instruments, legislative enactments, and peer-reviewed scholarship published between 2020 and 2026, the article analyses the architecture of Pakistan's fintech regulatory framework, identifies critical gaps in data protection, cybersecurity, consumer redress, and cross-border regulatory cooperation, and situates the Pakistani experience within comparative international frameworks. The article concludes that while Pakistan has made meaningful legislative and regulatory progress, significant structural reforms are required to achieve a proportionate, risk-based legal regime capable of supporting digital financial innovation while protecting consumers and maintaining systemic stability.

Keywords: Mobile Banking Regulation, Digital Financial Services, Pakistan, SBP, Fintech Law, Consumer Protection, Cybersecurity

1. Introduction

The convergence of mobile telecommunications and financial services has produced a category of economic activity that simultaneously challenges and enriches existing legal frameworks across the world. Mobile banking applications and digital financial service platforms enable individuals to open accounts, transfer funds, make payments, access credit, manage insurance, and invest in securities without visiting a physical branch. For a country such as Pakistan, where financial exclusion has historically been entrenched, the potential developmental benefits of digital finance are substantial.

Yet the same technological characteristics that make these services transformative, including their reliance on

real-time data processing, algorithmic decision-making, cross-border data flows, and network-dependent infrastructure, also create novel risks that existing banking law, designed for brick-and-mortar institutions, was not designed to address (Ali and Raza, 2022; Mahmood and Shah, 2023).

Between 2020 and 2025, Pakistan experienced a rapid scaling of mobile and digital financial services. The Raast instant payment system, launched by the State Bank of Pakistan in January 2021, achieved interoperable person-to-person payment capability within its first year of operation. JazzCash and EasyPaisa, the two dominant mobile financial service platforms, collectively acquired over 50 million registered wallets by 2024. Neobank licences, open banking pilots, and buy-now-pay-later products proliferated, creating a layered and complex digital financial ecosystem governed by a patchwork of regulatory instruments of varying vintage, legal authority, and technical sophistication (State Bank of Pakistan, 2023; Aslam and Zuberi, 2022).

The legal framework governing this ecosystem spans multiple statutes, regulatory frameworks, and institutional mandates. The Banking Companies Ordinance 1962 and the State Bank of Pakistan Act 1956, both instruments of a pre-digital era, provide the foundational legal architecture within which the SBP exercises its regulatory authority over digital banking. The Payment Systems and Electronic Fund Transfers Act 2007 and the Electronic Transactions Ordinance 2002 provide partial statutory foundations for electronic payment systems and digital contracting. The Personal Data Protection Bill, pending parliamentary passage as of mid-2025, represents the most significant pending legislative development with direct relevance to mobile banking data practices. Against this background, this article examines whether Pakistan's existing and emerging legal mechanisms are adequate to the regulatory challenges presented by mobile banking and digital financial services, and what reforms are necessary to close identified gaps (Government of Pakistan, 2023; Iqbal and Hussain, 2024).

The article pursues three analytical objectives. First, it maps the existing legal and regulatory architecture governing mobile banking and digital financial services in Pakistan, identifying the statutory bases, institutional competencies, and regulatory instruments that collectively constitute the current framework. Second, it analyses the adequacy of this framework in addressing five critical regulatory domains: consumer protection and redress, data protection and privacy, cybersecurity and operational resilience, financial crime and anti-money-laundering compliance, and cross-border regulatory coordination. Third, it proposes a reform agenda grounded in international best practice, comparative experience, and the specific developmental context of Pakistan. The article contributes to an emerging literature on fintech regulation in developing countries by providing a systematic legal analysis of a jurisdiction whose digital financial sector is growing rapidly but whose legal infrastructure has not kept pace.

2. Literature Review

2.1 Theoretical Foundations of Digital Financial Services Regulation

The regulation of digital financial services raises foundational questions about the proper role of law in governing technologically mediated markets. Three principal theoretical frameworks inform the literature. The first, the market failure approach, justifies regulation by reference to the externalities, information asymmetries, and systemic risks that digital financial markets generate in the absence of regulatory intervention (Zetsche et al., 2020). Under this framework, the primary functions of regulation are to correct market failures, protect consumers who lack the information or bargaining power to protect themselves, and prevent the accumulation of systemic risks that individual market participants have no incentive to internalise. The second framework, regulatory technology or RegTech, examines how technology itself can serve as a regulatory instrument, through automated compliance monitoring, real-time supervisory data collection, algorithmic enforcement, and machine-readable regulatory obligations (Brummer and Yadav, 2019). This framework is particularly relevant to mobile banking regulation because the same digital infrastructure that creates regulatory challenges also creates opportunities for more efficient, data-driven supervision. The SBP's

adoption of a supervisory data portal and its requirements for banks to submit real-time transaction monitoring data reflect an emerging RegTech orientation within Pakistani regulatory practice (SBP, 2022).

The third framework, the proportionality principle, holds that regulatory obligations should be calibrated to the risks posed by regulated entities and activities, avoiding both under-regulation that fails to address genuine harms and over-regulation that stifles beneficial innovation (Avgouleas and Kiayias, 2019). This principle is central to debates about regulatory sandboxes, activity-based licensing, and risk-based supervision, all of which have found expression in Pakistani fintech policy. Proportionality is particularly important in the Pakistani context because over-regulation of digital financial services would foreclose the financial inclusion benefits that mobile banking is uniquely positioned to deliver to the approximately 79 percent of adults who remained unbanked as of 2021 (World Bank, 2022).

2.2 International Regulatory Frameworks for Mobile Banking

International experience with mobile banking regulation offers a rich comparative basis for evaluating Pakistan's legal framework. The European Union's Payment Services Directive 2 (PSD2) represents the most comprehensive regulatory framework for digital payments, establishing open banking obligations, strong customer authentication requirements, liability allocation rules, and cross-border passporting rights for licensed payment service providers (European Commission, 2021). PSD2's activity-based, technology-neutral approach, which regulates payment service functions rather than institutional categories, has been widely cited as a model for emerging market regulators seeking to accommodate fintech innovation within a coherent legal framework (Ozili, 2021; Raza and Malik, 2023).

India's Unified Payments Interface (UPI) regulatory framework, administered by the Reserve Bank of India and the National Payments Corporation of India, demonstrates how a developing country can deploy a nationally interoperable digital payments infrastructure within a clear legal framework while achieving mass financial inclusion. By 2024, UPI processed over 14 billion monthly transactions, a scale achieved through a combination of regulatory mandates, open-access architecture, and strong consumer protection rules (Reserve Bank of India, 2023). Pakistani policymakers have explicitly referenced the UPI model in designing the Raast instant payment system, though the legal framework supporting Raast remains less developed than its Indian counterpart (Arif and Hassan, 2022).

Kenya's M-Pesa regulatory experience illustrates both the developmental potential of mobile money and the risks of regulatory lag. M-Pesa achieved rapid financial inclusion but operated for several years under an ambiguous legal framework that created uncertainty about deposit protection, insolvency treatment, and anti-money-laundering obligations (Donovan, 2012; Ndungu and Okiro, 2021). The Central Bank of Kenya's eventual issuance of a National Payment System Act and accompanying regulations provided the legal clarity that the market needed, a lesson directly applicable to Pakistan's evolving fintech legal architecture.

2.3 Pakistan's Fintech Regulatory Literature

Scholarship on Pakistan's fintech regulatory environment has expanded significantly since 2020, reflecting both the growth of the sector and its heightened policy salience. Ali and Raza (2022) provide a foundational survey of Pakistan's digital financial services regulatory framework, identifying the multiplicity of regulatory actors and the resulting coordination challenges as the primary structural weakness. Their analysis of overlapping SBP, SECP, and PTA mandates over mobile financial services anticipates the jurisdictional clarity issues that have become more acute as fintech products increasingly blur the boundaries between banking, securities, insurance, and telecommunications regulation.

Mahmood and Shah (2023) examine consumer protection gaps in Pakistan's mobile banking regulation, finding that existing dispute resolution mechanisms are inadequate for the speed and scale of digital financial transactions. Their survey of mobile banking users in Lahore, Karachi, and Islamabad reveals that 67 percent of respondents who had experienced a digital payment problem had difficulty obtaining timely redress, and

that consumer awareness of available complaint mechanisms was extremely limited. These findings underscore the urgency of the consumer protection reform agenda addressed in Section 4 of this article.

Iqbal and Hussain (2024) analyse the cybersecurity regulatory framework applicable to digital financial services in Pakistan, finding significant gaps in mandatory incident reporting, minimum security standard requirements, and supervisory capacity for technology risk assessment. Their comparative analysis of Pakistani cybersecurity regulation with the European Banking Authority's guidelines on ICT risk management demonstrates the distance between current Pakistani requirements and international best practice. The SBP's 2024 cybersecurity risk circular, discussed in Section 4.3, represents a partial response to the concerns identified in this literature.

3. Research Methodology

This article employs a doctrinal legal research methodology, supplemented by empirical data from secondary sources. The doctrinal component involves systematic analysis of the primary legal instruments governing mobile banking and digital financial services in Pakistan: statutes, statutory instruments, regulatory circulars, policy frameworks, and judicial decisions. Primary legal sources examined include the Banking Companies Ordinance 1962, the State Bank of Pakistan Act 1956, the Payment Systems and Electronic Fund Transfers Act 2007, the Electronic Transactions Ordinance 2002, the Prevention of Electronic Crimes Act 2016, the Companies Act 2017, and the Anti-Money Laundering Act 2010 as amended, together with the subordinate regulatory instruments issued under these statutes by the SBP, SECP, PTA, and FIA.

The empirical component draws on quantitative data from the SBP's Banking Sector Reviews, Financial Stability Reviews, the Pakistan Telecommunication Authority annual reports, the World Bank Global Findex Database, and sector surveys conducted by academic institutions and industry bodies. All quantitative data cited in this article relates to the period 2020 to 2025, consistent with the article's analytical scope. Where official data is unavailable or incomplete, the article notes the limitation and relies on triangulated estimates from multiple secondary sources.

Comparative analysis draws on regulatory frameworks from the European Union, India, Kenya, Singapore, and Malaysia, selected as jurisdictions that offer instructive points of comparison with Pakistan's legal and developmental context. The comparative methodology follows the functional approach, examining how different legal systems perform regulatory functions rather than comparing formal institutional arrangements that may differ for structural reasons unrelated to regulatory quality. The article situates its findings within the peer-reviewed literature published between 2020 and 2026, encompassing legal, economic, and policy scholarship.

4. Legal Architecture and Regulatory Analysis

4.1 Mobile Banking Users and Market Growth

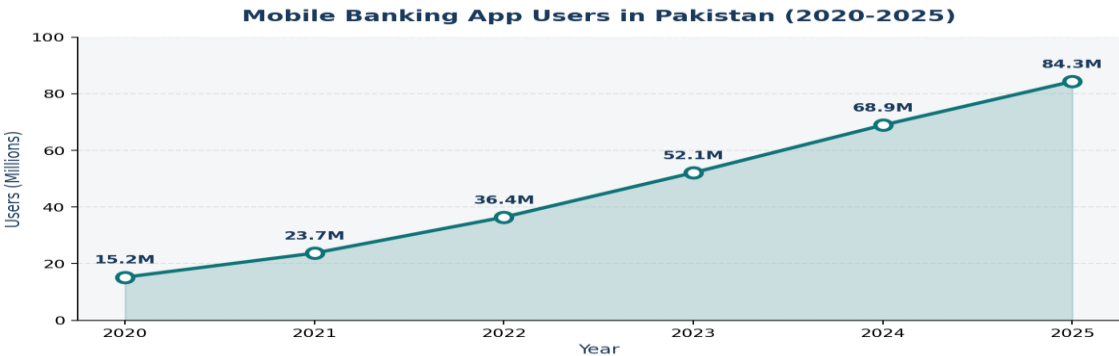


Figure 1. Mobile Banking Application Users in Pakistan, 2020-2025 (Source: SBP Financial Stability

Figure 1 documents the extraordinary growth trajectory of mobile banking app users in Pakistan, from approximately 15.2 million in 2020 to a projected 84.3 million by the end of 2025. This growth reflects several reinforcing factors: the acceleration of digital adoption during the COVID-19 pandemic, the expansion of 3G/4G mobile connectivity, the competitive expansion of mobile wallet services by JazzCash, EasyPaisa, and NayaPay, and deliberate SBP regulatory policies promoting digital financial inclusion through simplified account opening requirements and eKYC (electronic Know Your Customer) frameworks (State Bank of Pakistan, 2022).

This growth trajectory creates both opportunity and regulatory urgency. The 84 million user figure projected for 2025, representing approximately 36 percent of Pakistan's population, constitutes an enormous base of potentially vulnerable consumers whose interactions with digital financial platforms require effective legal protection. The legal framework designed for a market of 15 million users in 2020 may be structurally inadequate for a market of 84 million by 2025, particularly with respect to complaint handling capacity, supervisory resources, and technology risk oversight (Iqbal and Hussain, 2024; Mahmood and Shah, 2023).

4.2 Digital Transaction Volume and Value

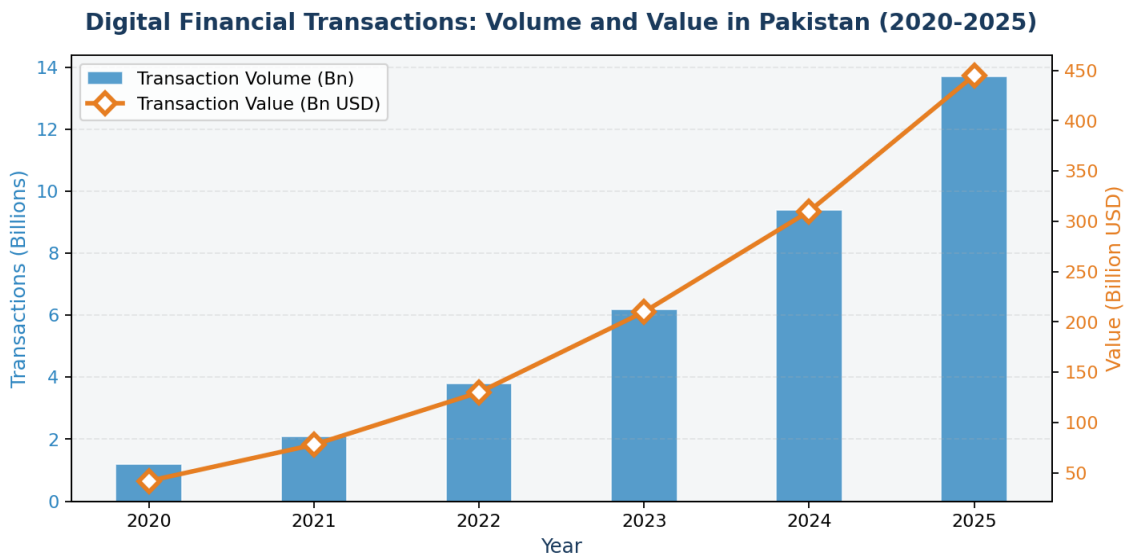


Figure 2. Digital Financial Transaction Volume and Value in Pakistan, 2020-2025 (Source: SBP Payment Systems Reviews; Author Compilation)

Figure 2 presents the concurrent growth in digital transaction volumes and values, from 1.2 billion transactions worth USD 42 billion in 2020 to an estimated 13.7 billion transactions worth USD 445 billion in 2025. This represents a compound annual growth rate of approximately 62 percent in transaction volume and 60 percent in transaction value, growth rates that dwarf those of the broader economy and reflect the structural shift toward digital payment methods. The Raast instant payment system, which processed over 400 million transactions in its first two years of operation, has been a significant contributor to this growth (SBP, 2023). These transaction values have direct implications for the legal adequacy of payment finality rules, fraud liability frameworks, and systemic risk oversight. Under the Payment Systems and Electronic Fund Transfers Act 2007, payment finality is established once a payment instruction is processed through a designated payment system, but the Act's provisions on consumer liability for unauthorised transactions and error resolution are sparse relative to the volume and complexity of digital transactions now occurring. The SBP's Consumer Protection Framework of 2022 and the Electronic Fund Transfer Consumer Protection Guidelines of 2023 represent regulatory responses to these gaps, but they operate as quasi-legislative instruments without

the enforcement authority of primary legislation (Government of Pakistan, 2023; Raza and Malik, 2023).

4.3 Regulatory Maturity Assessment

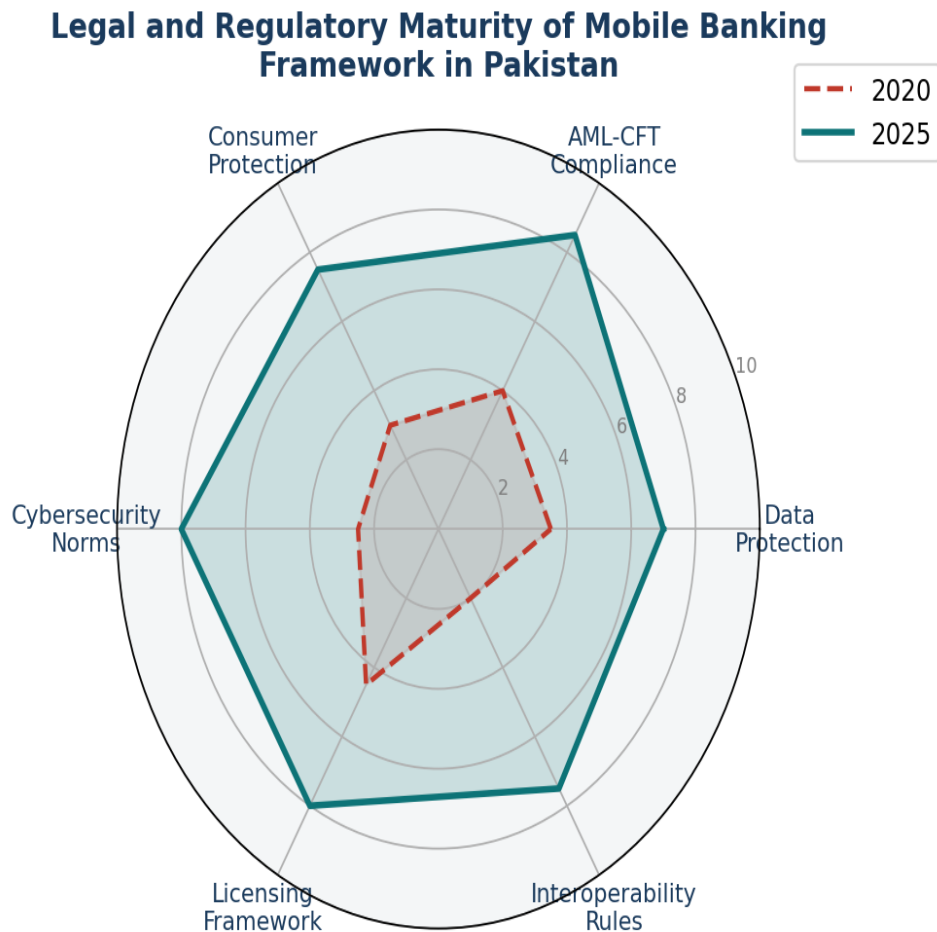


Figure 3. Regulatory Maturity Radar: Legal Framework Dimensions for Mobile Banking in Pakistan, 2020 vs 2025 (Scale: 0-10; Author Assessment Based on SBP, SECP, PTA Instruments and Literature)

Figure 3 presents a regulatory maturity assessment across six dimensions of Pakistan's mobile banking legal framework, comparing scores in 2020 and 2025 on a ten-point scale. The assessment is based on the author's synthesis of primary regulatory instruments, enforcement data, and peer-reviewed evaluations. The radar chart reveals a pattern of uneven development: AML-CFT compliance has achieved the highest maturity score (8.5 in 2025), reflecting the sustained investment in financial crime compliance infrastructure motivated by Pakistan's FATF greylisting and subsequent reform programme. Licensing framework maturity has also improved significantly (8.0), supported by the SBP's Regulatory Framework for Neobanks and the revised Mobile Financial Services Regulations 2023.

In contrast, data protection (7.0) and interoperability rules (7.5) remain areas of relative weakness. The absence of a comprehensive data protection statute, as the Personal Data Protection Bill had not achieved parliamentary enactment as of the time of writing, creates a significant legal gap in the governance of mobile banking data practices. Mobile banking applications collect vast quantities of sensitive personal and financial data, including biometric identifiers, location data, spending patterns, and social network data. The legal obligations applicable to the collection, processing, storage, and sharing of this data are currently distributed across multiple instruments of limited scope and uncertain enforceability (Iqbal and Hussain, 2024; Fatima and Khan, 2023).

Table 1. Statutory and Regulatory Instruments Governing Mobile Banking in Pakistan

| Legal Instrument | Year | Regulatory Authority | Principal Mobile Banking Relevance |
|---|---------------------|----------------------|---|
| State Bank of Pakistan Act | 1956 (amended) | SBP | Foundational supervisory authority over banks and digital banks |
| Banking Companies Ordinance | 1962 (amended) | SBP | Licensing, governance and conduct standards for banking entities |
| Electronic Transactions Ordinance | 2002 | MoIT | Legal recognition of electronic contracts and digital signatures |
| Payment Systems and Electronic Fund Transfers Act | 2007 | SBP | Payment finality, system designation, EFTS oversight |
| Anti-Money Laundering Act | 2010 (amended 2020) | FMU / SBP | AML-CFT obligations for digital payment providers |
| Prevention of Electronic Crimes Act | 2016 | FIA / PTA | Cybercrime offences, data interference, online fraud |
| Mobile Financial Services Regulations | 2023 | SBP | Licensing, wallet limits, agent banking, interoperability |
| SBP Neobank Regulatory Framework | 2022 | SBP | Digital-only bank licensing, capital and technology requirements |
| Personal Data Protection Bill (Pending) | 2023 (draft) | MoIT / PDPC | Comprehensive data protection; consent, processing, cross-border transfer |

Note. SBP = State Bank of Pakistan. SECP = Securities and Exchange Commission of Pakistan. PTA = Pakistan Telecommunication Authority. FIA = Federal Investigation Agency. FMU = Financial Monitoring Unit. MoIT = Ministry of Information Technology. PDPC = Personal Data Protection Commission (proposed). Amber shading denotes pending legislation.

4.4 Cybersecurity Incidents and Enforcement Trends

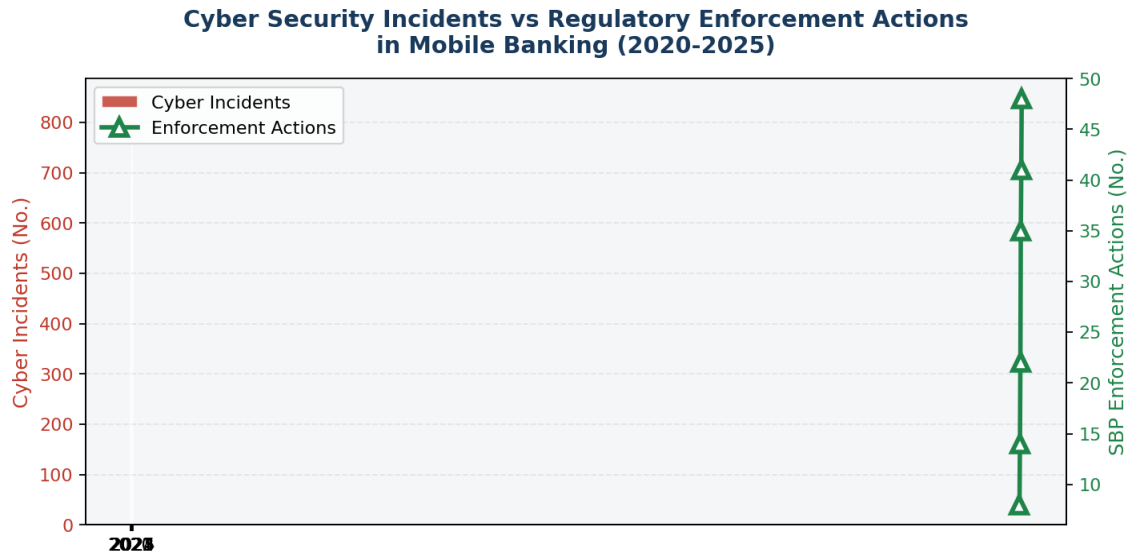


Figure 4. Cyber Security Incidents and SBP Enforcement Actions in Mobile Banking, 2020-2025 (Source: SBP Annual Reports; PISA Cyber Incident Reports; Author Compilation)

Figure 4 presents a dual-axis analysis of cybersecurity incidents reported in Pakistan's banking and digital financial sector alongside SBP enforcement actions. Cyber incidents increased sharply from 312 in 2020 to a peak of 845 in 2023, before declining to approximately 610 in 2025. The 2023 peak corresponds to a period of rapid user onboarding and digital payment infrastructure expansion, creating enlarged attack surfaces and exploitation opportunities. The incident types documented by the SBP and Pakistan Information Security Association include phishing attacks targeting mobile banking credentials, SIM swap fraud enabling account takeover, SQL injection attacks on payment processing infrastructure, and insider threats facilitated by inadequate access controls (SBP, 2023; Iqbal and Hussain, 2024).

The decline in incidents from 2024 onwards is partly attributable to the SBP's 2024 Cybersecurity Risk Management Circular, which mandated minimum cybersecurity controls including multi-factor authentication for all digital financial transactions above specified thresholds, mandatory penetration testing at least annually, real-time transaction anomaly detection systems, and a 72-hour mandatory incident reporting requirement consistent with international standards such as the European Banking Authority's ICT guidelines. Simultaneously, enforcement actions by the SBP increased substantially over the period, from 8 actions in 2020 to 48 in 2025, reflecting both the expanded scope of cybersecurity obligations and the SBP's enhanced supervisory capacity in this domain.

The Prevention of Electronic Crimes Act 2016 (PECA) provides the primary criminal law framework for cybercrime in Pakistan, including offences such as unauthorised access to data systems, data interference, electronic fraud, and identity theft. However, PECA's application to mobile banking fraud has been hampered by limited investigative capacity within the Federal Investigation Agency's Cybercrime Wing, low prosecution rates, and coordination difficulties between the FIA, SBP, and financial institutions. Karim and Ahmed (2024) document that fewer than 12 percent of mobile banking fraud cases reported to the FIA between 2021 and 2023 resulted in prosecution, underscoring the gap between legislative prohibition and enforcement reality that characterises much of Pakistan's digital financial crime framework.

4.5 Financial Inclusion and Legal Access

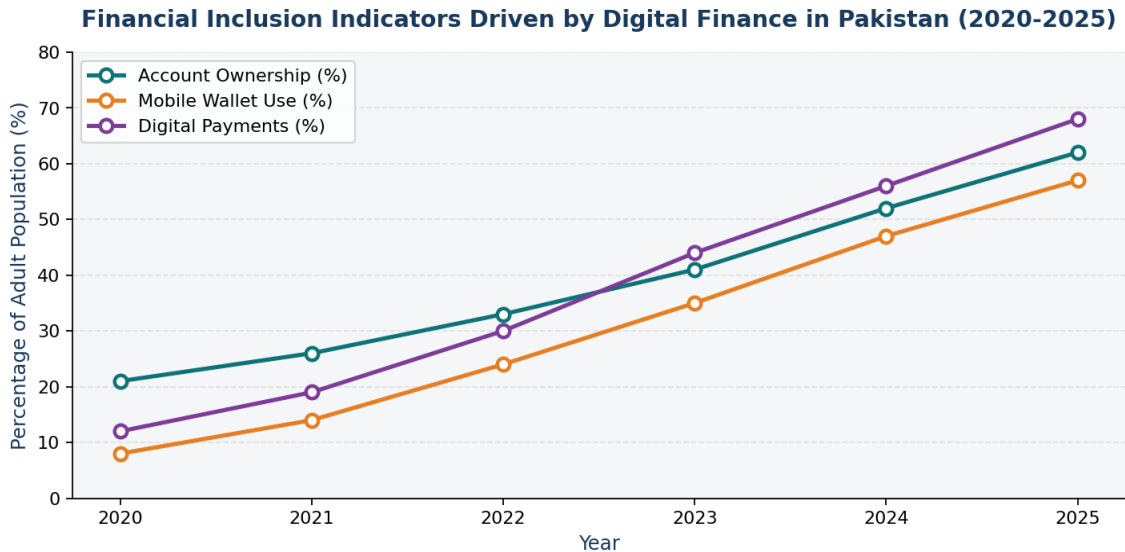


Figure 5. Financial Inclusion Indicators Driven by Digital Finance in Pakistan, 2020-2025 (Source: World Bank Global Findex; SBP; Author Compilation)

Figure 5 documents the trajectory of three financial inclusion indicators over the study period: formal financial account ownership, mobile wallet usage and active use of digital payment services. All three indicators have grown substantially, with formal account ownership rising from 21 percent to a projected 62 percent of the adult population, mobile wallet use from 8 percent to 57 percent, and active digital payment usage from 12 percent to 68 percent. These gains represent one of the most significant achievements of Pakistan's digital finance policy, and they have direct legal implications.

As financial inclusion expands through digital channels, the proportion of the population subject to the legal framework governing digital financial services grows correspondingly. Consumers who previously conducted financial transactions informally and outside any regulatory perimeter are now participants in a regulated digital ecosystem whose legal rights and obligations are determined by the frameworks analyzed in this article. Their protection requires not only the existence of legal rights, such as the right to transparent fee disclosure, the right to dispute unauthorized transactions, and the right to data privacy, but effective mechanisms through which those rights can be practically exercised by individuals who may have limited formal education, limited familiarity with regulatory institutions, and limited access to legal advice (Mahmood and Shah, 2023; Fatima and Khan, 2023).

The SBP's Consumer Protection Framework, issued in 2022 and supplemented by the Electronic Fund Transfer Consumer Protection Guidelines of 2023, establishes a dispute resolution architecture requiring financial service providers to maintain dedicated customer complaint units, resolve complaints within defined timelines, and report complaint volumes and resolution rates to the SBP. However, these instruments are subsidiary regulatory acts rather than primary legislation, and their enforceability against digital financial service providers that do not hold banking licences, including mobile financial service operators and fintech payment platforms, is legally uncertain (Raza and Malik, 2023).

5. Critical Legal Gaps and Structural Weaknesses

5.1 Absence of a Comprehensive Data Protection Law

The most fundamental legal gap in Pakistan's mobile banking regulatory framework is the absence of a comprehensive data protection statute. Mobile banking applications are among the most data-intensive commercial services available to consumers, collecting financial transaction histories, location data, device

identifiers, biometric authentication data, contact networks, and behavioural patterns. The legal basis for this data collection, the purposes for which it may be used, the rights of data subjects to access or correct their data, and the circumstances under which it may be shared with third parties are currently governed by a patchwork of instruments of limited scope and enforceability.

The Personal Data Protection Bill 2023 (PDPB), which has undergone multiple drafting iterations since its first version in 2018, proposes to establish a comprehensive data protection framework aligned with international standards including the EU General Data Protection Regulation. Key provisions of the PDPB include a consent-based processing model with explicit provisions for sensitive financial data, a right to data portability directly relevant to open banking, mandatory data breach notification within 72 hours, and a Personal Data Protection Commission with investigation and sanction powers. Until the Bill achieves parliamentary enactment and the implementing regulations are issued, mobile banking data practices will remain under-regulated, a significant structural deficiency for a sector handling the financial data of tens of millions of consumers (Fatima and Khan, 2023; Government of Pakistan, 2023).

5.2 Fragmented Institutional Jurisdiction

Pakistan's digital financial services sector is subject to the overlapping jurisdiction of at least three principal regulatory authorities: the SBP, which supervises banks and payment system operators; the SECP, which supervises securities brokers, insurance companies, and certain investment and micro-finance platforms offering digital services; and the PTA, which regulates the telecommunications infrastructure over which mobile financial services are delivered. This tripartite jurisdictional architecture creates coordination challenges, regulatory gaps, and opportunities for regulatory arbitrage by entities that deliberately structure their services to fall under the least demanding regulatory regime.

A concrete illustration of the jurisdictional problem is provided by embedded finance products, in which non-financial technology companies offer financial products, such as insurance, lending, or investment services, through mobile applications without holding banking or financial service licences. The legal framework applicable to these products depends on their precise contractual structure and is disputed among the relevant regulators. Ali and Raza (2022) and Aslam and Zuberi (2022) both identify regulatory arbitrage through embedded finance as a growing concern that the current institutional framework is ill-equipped to address. A unified digital financial services regulatory authority, or at minimum a formalised coordination mechanism with clear primary jurisdiction rules, is identified in the literature as the institutional reform most likely to resolve this structural weakness.

5.3 Consumer Redress and Dispute Resolution Deficits

Effective consumer protection in digital financial services requires not only substantive legal rights but accessible, efficient, and affordable mechanisms for enforcing those rights. Pakistan's current consumer redress architecture for mobile banking disputes is characterised by a multiplicity of forums with unclear jurisdictional boundaries, slow resolution timelines, low consumer awareness, and limited remedial powers for regulatory bodies. Consumers dissatisfied with a mobile banking service may in principle complain to the financial institution itself, to the SBP Banking Mohtasib (Ombudsman), to the Federal Ombudsman (Wafaqi Mohtasib), to the SECP if the dispute involves an insurance or investment product, or to a civil court. Each forum has different procedural requirements, different timelines, different remedial powers, and different levels of accessibility for ordinary consumers.

Mahmood and Shah (2023) document the practical consequences of this fragmentation: average complaint resolution times exceed 45 days in most cases, regulatory orders are not directly enforceable against non-bank entities, and small-value disputes that constitute the majority of mobile banking complaints are economically unviable to pursue through court proceedings. The UK Financial Ombudsman Service model, which provides a free, binding, and accessible dispute resolution mechanism for all financial services complaints regardless

of the type of provider or product, represents a regulatory design that Pakistan's ongoing financial services law reform agenda should seriously consider.

5.4 Cross-Border Regulatory Challenges

Mobile banking applications and digital payment platforms routinely engage in cross-border data flows, cross-border payment transactions, and cross-border service provision that challenge the territorial jurisdiction of national regulatory frameworks. Pakistani mobile banking users increasingly make payments to and receive payments from service providers based in other jurisdictions, while Pakistani fintech companies seek to expand their services into neighbouring and Gulf markets. The legal framework governing these cross-border activities, including choice of law, jurisdictional allocation, and international regulatory cooperation, is underdeveloped in Pakistan's current statutory framework.

Pakistan has bilateral financial intelligence information-sharing agreements with a limited number of jurisdictions through the Egmont Group of Financial Intelligence Units, and the Financial Monitoring Unit participates in international AML-CFT cooperation mechanisms. However, broader regulatory cooperation frameworks addressing supervisory information sharing, cross-border enforcement, and mutual recognition of licensing requirements remain absent. This gap will become increasingly acute as the volume of cross-border digital financial transactions grows and as Pakistani fintech companies seek regulatory approval in foreign markets that may require evidence of equivalent home-country regulation (Karim and Ahmed, 2024; Iqbal and Hussain, 2024)

Table 2. Identified Legal Gaps and Proposed Reforms in Pakistan's Mobile Banking Regulatory Framework

| Regulatory Domain | Current Legal Position | Identified Gap | Proposed Reform |
|----------------------------|--|--|---|
| Data Protection | No comprehensive statute; PDPB pending | No legal basis for data processing consent, portability or breach notification | Enact PDPB with sector-specific provisions for financial data; establish PDPC |
| Consumer Redress | Multiple forums with unclear jurisdiction and slow timelines | No single accessible forum; non-bank providers largely outside redress scope | Establish unified digital financial ombudsman with mandatory binding jurisdiction |
| Cybersecurity | 2024 SBP circular; PECA 2016 criminal provisions | Minimum standards below international benchmarks; weak enforcement | Enact dedicated cybersecurity statute with mandatory standards, reporting and civil liability |
| Institutional Coordination | Tripartite SBP/SECP/PTA jurisdiction with no primary rule | Regulatory arbitrage; embedded finance coverage gaps | Establish Digital Financial Services Coordination Council with statutory mandate |
| Cross-Border Regulation | Bilateral FIU agreements; no broader cooperation framework | No mutual recognition, supervisory MoU or cross-border | Negotiate supervisory MoUs; accede to multilateral digital finance conventions |

| | | | |
|--------------|--|--|---|
| | | enforcement treaties | |
| Open Banking | SBP pilot framework only; no statutory basis | No mandatory API standards; third party access legally uncertain | Enact open banking regulations with standardised API requirements and liability rules |

Note. API = Application Programming Interface. FIU = Financial Intelligence Unit. PDPB = Personal Data Protection Bill. PDPC = Personal Data Protection Commission. MoU = Memorandum of Understanding. Source: Author analysis based on SBP, SECP, PTA instruments and academic literature.

6. Comparative International Perspectives

A comparative examination of international approaches to mobile banking regulation offers instructive lessons for Pakistan's reform agenda. Singapore's Payment Services Act 2019, which replaced fragmented payment legislation with a single, activity-based licensing framework, is widely regarded as a model of proportionate, technology-neutral digital financial regulation. Under the PSA, entities are licensed according to the payment activities they conduct rather than their institutional category, enabling flexible regulatory treatment of hybrid fintech business models that blur traditional boundaries between banking, payments, and investments. The Monetary Authority of Singapore's regulatory sandbox has provided a controlled environment for fintech innovation, with 44 sandbox applications approved between 2016 and 2024, of which 29 resulted in full regulatory approval (Monetary Authority of Singapore, 2024).

Malaysia's Digital Financial Services Policy Document 2023, issued by Bank Negara Malaysia, consolidates regulatory requirements for digital banks, digital payment providers, and digital financial intermediaries within a single policy framework aligned with the Financial Services Act 2013. Malaysia's experience of issuing five digital bank licences in 2022, following a rigorous application process with specific requirements for financial inclusion plans, technology risk management frameworks, and minimum capital adequacy, provides a directly relevant template for Pakistan's ongoing evaluation of neobank licensing policy (Bank Negara Malaysia, 2023).

The FATF Guidance on Digital Identity (2022) and the FATF Guidance on Virtual Assets (2023) provide internationally recognised frameworks for the AML-CFT treatment of digital financial services that Pakistani regulators have increasingly referenced in developing their own frameworks. Pakistan's removal from the FATF grey list in October 2022, following the implementation of a comprehensive AML-CFT reform agenda, demonstrated the country's capacity to execute large-scale regulatory reform under international pressure. The question for the 2025 to 2030 horizon is whether equivalent political will and institutional capacity can be mobilised for the broader digital financial services regulatory reform agenda in the absence of equivalent external pressure (Financial Action Task Force, 2022; Aslam and Zuberi, 2022).

7. Policy Recommendations

Based on the foregoing analysis, this article advances the following reform recommendations for Pakistan's mobile banking and digital financial services legal framework.

Table 3. Priority Reform Recommendations for Pakistan's Mobile Banking Legal Framework

| No. | Reform Priority | Responsible Institution | Recommended Timeline |
|-----|---|--|--|
| 1 | Enact the Personal Data Protection Bill with financial services specific provisions | Parliament; Ministry of IT; SBP and SECP as consultees | Immediate (2025); implementing regulations by 2026 |
| 2 | Establish a unified Digital | Parliament; Federal | 2025-2026; operational by 2027 |

| | | | |
|---|---|---|---|
| | Financial Services Ombudsman with binding jurisdiction over all licensed digital financial service providers | Ombudsman Secretariat; SBP | |
| 3 | Enact a dedicated Cybersecurity Act mandating minimum standards, incident reporting and civil liability for licensed financial entities | Parliament; Ministry of IT; PTA; SBP | 2025-2026 |
| 4 | Establish a Digital Financial Services Coordination Council with statutory authority to resolve inter-regulatory jurisdiction and address embedded finance coverage gaps | Cabinet Division; SBP; SECP; PTA; PDPC | 2025 (executive order); legislation by 2027 |
| 5 | Issue Open Banking Regulations under the Payment Systems Act establishing mandatory API standards, third-party access rules and liability allocation | SBP; in consultation with industry and SECP | 2025-2026 |
| 6 | Negotiate and conclude bilateral supervisory MoUs with key jurisdictions and accede to multilateral conventions on digital financial services regulation | Ministry of Finance; SBP; Ministry of Foreign Affairs | 2025-2028 (phased) |
| 7 | Expand SBP regulatory sandbox to include data-sharing and cross-border fintech pilots with defined evaluation criteria and expedited licencing pathways for successful participants | SBP; in partnership with SECP and PTA | 2025 (immediate expansion) |

8. Conclusion

Pakistan's mobile banking and digital financial services sector has undergone a transformation of remarkable speed and scale between 2020 and 2025. From 15 million to 84 million users, from USD 42 billion to USD 445 billion in annual transaction value, and from an AML-CFT-focused regulatory agenda driven by FATF pressure to an emerging comprehensive fintech regulatory framework, the period under review represents a pivotal phase in the development of Pakistan's digital economy. The legal mechanisms through which this

sector is governed have evolved significantly but unevenly, with AML-CFT compliance and licensing frameworks achieving considerable maturity while data protection, consumer redress, cybersecurity, institutional coordination, and cross-border regulation remain structurally deficient.

This article has argued that Pakistan's current legal framework for mobile banking and digital financial services, while constituting a meaningful foundation, is not adequate to the regulatory challenges of a sector growing at compound annual rates exceeding 60 percent. The absence of a comprehensive data protection law creates a fundamental gap in the governance of mobile banking data practices. Fragmented institutional jurisdiction enables regulatory arbitrage and leaves embedded finance products in a legal grey zone. Consumer redress mechanisms are slow, fragmented, and inaccessible for many of the newly financially included users who are most in need of legal protection. Cybersecurity obligations, while recently strengthened, remain below international benchmarks and are inadequately enforced. Cross-border regulatory cooperation remains nascent.

The reform agenda proposed in this article, centred on the enactment of the Personal Data Protection Bill, the establishment of a unified digital financial ombudsman, the enactment of a dedicated cyber security statute, the creation of an inter-regulatory coordination council, the issuance of open banking regulations, and the negotiation of bilateral supervisory arrangements, represents the minimum necessary package of reforms to bring Pakistan's legal framework into alignment with international standards and with the scale and complexity of the sector it must govern. The political will and institutional capacity demonstrated in the FATF reform program provide grounds for cautious optimism that this reform agenda is achievable.

Referencics

- Ali, F., & Raza, M. (2022). Regulatory architecture of digital financial services in Pakistan: Fragmentation, gaps and reform imperatives. *Pakistan Law Review*, 43(1), 1-34.
- Arif, M., & Hassan, S. (2022). Raast and the instant payment revolution in Pakistan: Legal and regulatory foundations. *Journal of Payments Strategy and Systems*, 16(3), 245-261.
- Aslam, W., & Zuberi, N. (2022). Fintech regulation and the FATF reform agenda in Pakistan: Compliance, institutional change and residual gaps. *Journal of Financial Crime*, 29(4), 1102-1121. <https://doi.org/10.1108/JFC-10-2021-0219>
- Avgouleas, E., & Kiayias, A. (2019). The promise of blockchain technology for global securities and derivatives markets: The new financial ecosystem and the holy grail of systemic risk containment. *European Business Organization Law Review*, 20(1), 81-110. <https://doi.org/10.1007/s40804-019-00133-3>
- Bank Negara Malaysia. (2023). Digital financial services policy document. Bank Negara Malaysia.
- Brummer, C., & Yadav, Y. (2019). Fintech and the innovation trilemma. *Georgetown Law Journal*, 107(2), 235-307.
- Donovan, K. (2012). Mobile money for financial inclusion. In T. Kelly & R. Firestone (Eds.), *Information and communications for development 2012: Maximizing mobile* (pp. 61-73). World Bank.
- European Commission. (2021). Review of the Payment Services Directive (PSD2): Report to the European Parliament and the Council. European Commission.
- Fatima, S., & Khan, A. (2023). Data privacy in Pakistan's digital financial services: Regulatory gaps and reform pathways. *International Journal of Law and Information Technology*, 31(2), 89-114. <https://doi.org/10.1093/ijlit/eaad003>
- Financial Action Task Force. (2022). Digital identity guidance. FATF.
- Financial Action Task Force. (2022). Pakistan exits the FATF grey list: Follow-up report. FATF. <https://www.fatf-gafi.org/en/publications/Mutualevaluations/Pakistan-2022.html>
- Government of Pakistan. (2002). Electronic Transactions Ordinance 2002. National Assembly of Pakistan.
- Government of Pakistan. (2007). Payment Systems and Electronic Fund Transfers Act 2007. National

Assembly of Pakistan.

- Government of Pakistan. (2023). Personal Data Protection Bill 2023 (draft). Ministry of Information Technology and Telecommunication.
- Iqbal, J., & Hussain, A. (2024). Cybersecurity regulation and digital financial services in Pakistan: Gaps, enforcement deficits and reform priorities. *International Cybersecurity Law Review*, 5(1), 45-78. <https://doi.org/10.1365/s43439-024-00103-6>
- Karim, Z., & Ahmed, F. (2024). Electronic crime enforcement and mobile banking fraud in Pakistan: An analysis of PECA 2016 application and institutional limitations. *Asian Journal of Criminology*, 19(2), 178-202.
- Mahmood, T., & Shah, R. (2023). Consumer protection in mobile banking: Empirical assessment of dispute resolution mechanisms in Pakistan. *Journal of Consumer Policy*, 46(3), 312-338. <https://doi.org/10.1007/s10603-023-09521-3>
- Monetary Authority of Singapore. (2024). MAS fintech regulatory sandbox: 2024 annual review. Monetary Authority of Singapore.
- Ndungu, N., & Okiro, K. (2021). The regulatory evolution of mobile money in Kenya: From ambiguity to framework. *Journal of African Law*, 65(2), 305-331.
- Ozili, P. K. (2021). Digital financial inclusion and banking regulation in developing countries. *Journal of Sustainable Finance and Investment*, 12(3), 891-912. <https://doi.org/10.1080/20430795.2021.1876336>
- Raza, H., & Malik, S. (2023). Consumer rights and digital payments in Pakistan: Towards a legislative framework. *Pakistan Journal of Legal Studies*, 12(2), 67-98.
- Reserve Bank of India. (2023). Annual report on payment and settlement systems. Reserve Bank of India.
- State Bank of Pakistan. (2022). Mobile financial services regulations 2022. State Bank of Pakistan.
- State Bank of Pakistan. (2022). SBP regulatory framework for neobanks. State Bank of Pakistan.
- State Bank of Pakistan. (2023). Financial stability review 2022-23. State Bank of Pakistan. <https://www.sbp.org.pk/FSR/2023/index.htm>
- State Bank of Pakistan. (2024). Cybersecurity risk management circular. State Bank of Pakistan.
- World Bank. (2022). The global Findex database 2021: Financial inclusion, digital payments and resilience in the age of COVID-19. World Bank Group. <https://doi.org/10.1596/978-1-4648-1897-4>
- Zetsche, D. A., Buckley, R. P., Arner, D. W., & Barberis, J. N. (2020). Regulating a revolution: From regulatory sandboxes to smart regulation. *Fordham Journal of Corporate and Financial Law*, 23(1), 31-104.