

The Legal and Regulatory Framework for Cryptocurrency and Fintech in Pakistan: Challenges and Policy Recommendations

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Abstract

Fintech, short for financial technology, refers to the use of technology to improve and automate financial services. It encompasses a wide range of financial activities, including online banking, payment processing, investment management, and lending. Cryptocurrency is a digital or virtual currency that uses cryptography (the process of converting legible information into uncrackable code) for security. It is decentralised and operates independently of a central bank or government. Blockchain technology is a decentralised, distributed ledger that records transactions across many computers in a secure, tamper-proof way. It was originally developed for use in cryptocurrencies but has since been adopted in many other industries for its potential to improve transparency and security in transactions. This article examines the legal and regulatory framework for cryptocurrency and blockchain technology in fintech in Pakistan. The State Bank of Pakistan's stance on fintech and relevant laws and regulations governing the use of cryptocurrency in Pakistan are analysed. The article also explores legal and regulatory issues such as consumer protection, data privacy, and cybersecurity. The challenges faced by fintech companies in navigating the complex regulatory landscape are discussed, and the implications for the future of fintech in Pakistan are considered. The article concludes with recommendations for policymakers and fintech companies in navigating the legal and regulatory landscape.

Keywords: Fintech, cryptocurrency, blockchain technology, State Bank of Pakistan, consumer protection, data privacy, cybersecurity, adoption of fintech in Pakistan

1

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Introduction

Cryptocurrency has been gaining popularity worldwide as an alternative form of digital currency. The rise of cryptocurrency has led to a growing need for regulatory frameworks to manage its risks and opportunities. Pakistan, a developing country with a rapidly growing economy, is no exception. The regulatory framework for cryptocurrency in Pakistan is still evolving, and policymakers and regulators are struggling to keep pace with the rapidly changing landscape of the digital currency market.

The increasing interest in cryptocurrency is driven by its potential to revolutionize financial transactions and empower the unbanked population. However, its rapid growth has also raised concerns about its risks, including its association with illicit activities such as money laundering, terrorism financing, and tax evasion. As a result, many countries have implemented regulations to address these concerns and ensure a safe and sustainable market for digital currencies.

In Pakistan, the State Bank of Pakistan (SBP) is the primary regulator of the country's financial system. In April 2018, the SBP issued a circular banning all cryptocurrency-related transactions in Pakistan. However, this circular was challenged in the courts, and the ban was subsequently lifted. Since then, the SBP has issued several guidelines and regulations governing the use of cryptocurrency in Pakistan.

The SBP's regulatory framework for cryptocurrency in Pakistan has evolved. Initially, the SBP took a cautious approach towards cryptocurrency due to its risks, such as money laundering and terrorism financing. However, in recent years, the SBP has become more receptive to the potential benefits of cryptocurrency, such as financial inclusion and innovation.

Despite the SBP's efforts to regulate cryptocurrency in Pakistan, challenges remain. One major challenge is the lack of clarity regarding the legal and regulatory environment for digital currencies in the country. Pakistan does not have specific laws regulating cryptocurrency, and it is unclear how existing laws, such as the Foreign Exchange Regulations Act 1947 and the Anti-Money Laundering Act 2010, apply to cryptocurrency.

Another challenge is consumer protection, data privacy, and cybersecurity. The use of cryptocurrency is associated with

cybersecurity risks, such as hacking and theft. Additionally, cryptocurrency transactions are often irreversible, making it difficult for consumers to seek redress in the event of fraud or errors.

Cryptocurrency companies in Pakistan face significant obstacles in accessing banking and financial services. Banks in Pakistan are hesitant to provide services to cryptocurrency companies due to the regulatory uncertainties and risks associated with digital currencies. This lack of access to financial services makes it difficult for cryptocurrency companies to operate in Pakistan and could stifle innovation and growth in the sector.

The regulatory landscape for cryptocurrency in Pakistan has significant implications for the future of fintech in the country. A supportive regulatory environment could encourage innovation and investment in the fintech sector, while an unfavourable environment could stifle growth and innovation. The lack of clarity regarding the legal and regulatory framework for digital currencies creates uncertainty for investors and entrepreneurs.

In sum, this research paper aims to provide a comprehensive analysis of the regulatory framework for cryptocurrency in Pakistan. By examining the SBP's stance on cryptocurrency, relevant laws and regulations, and legal and regulatory issues such as consumer protection, data privacy, and cybersecurity, this paper will shed light on the challenges and opportunities facing cryptocurrency in Pakistan. Additionally, this paper will provide recommendations for policymakers and cryptocurrency companies on navigating the regulatory landscape and ensuring the growth of a safe and sustainable fintech industry in Pakistan.

Literature Review

Cryptocurrency is a form of digital or virtual currency that incorporates cryptographic techniques for security measures and functions autonomously without being subject to control by a central bank or governing authority. It is structured to prioritize security, anonymity, and decentralization, with transactions being documented on a transparent public ledger called a blockchain (Nakamoto, 2008).

Fintech, short for financial technology, is a term used to describe innovative technology-driven financial services and products that aim to provide consumers with improved access to

financial services, increased efficiency, and reduced costs. According to the Financial Stability Oversight Council, fintech is "the use of technology to support and enhance financial services" (United State Department of Treasury, 2016).

The rise of cryptocurrency and blockchain technology has resulted in a need for regulatory frameworks to manage their risks and opportunities, particularly in developing countries such as Pakistan. The legal and regulatory landscape for fintech and cryptocurrency in Pakistan has been evolving rapidly, and policymakers and regulators are trying to keep pace with the changing market.

Several studies have examined the legal and regulatory challenges faced by fintech companies in Pakistan. A study by Aimen Asif (2019) examined the perspective of the State Bank of Pakistan regarding fintech and examined the pertinent legal and regulatory frameworks that oversee the utilization of cryptocurrency within Pakistan. The study highlighted the need for a comprehensive regulatory framework to support the growth of fintech and cryptocurrency in the country.

Similarly, a study by Chouhan (2017) examined the regulatory challenges faced by fintech startups in cryptocurrency across different jurisdictions, including issues related to licensing and compliance. The study emphasised the need for a supportive regulatory environment to encourage innovation and growth in the fintech sector.

In terms of legal sources, the State Bank of Pakistan has issued several circulars and guidelines to regulate cryptocurrency and fintech in Pakistan. The SBP's circulars from 2018 and 2019 banned all cryptocurrency-related transactions in Pakistan, (State Bank of Pakistan, 2018).

Overall, the literature suggests that the legal and regulatory framework for fintech and cryptocurrency in Pakistan is still evolving, and there is a need for a comprehensive regulatory framework to support the growth of the industry. The literature also emphasizes the need for a supportive regulatory environment to encourage innovation and growth in the fintech sector.

Regulatory Framework of Crypto Currency in Pakistan and India

Over the past couple of years, Pakistan has witnessed a significant surge in cryptocurrency adoption, propelling the country to the 3rd position in the Global Crypto Adoption Index for 2020-21. During this period, the value of cryptocurrency in Pakistan reached approximately US\$ 20 billion, showcasing an extraordinary growth of 711 per cent. Despite this remarkable expansion, the existing legal framework in the country has left cryptocurrency in a state of ambiguity.

The State Bank of Pakistan (SBP) has ‘advised’ the general public to exercise caution when dealing with cryptocurrencies, while also imposing a ‘prohibition’ on entities under its jurisdiction from engaging in transactions involving virtual currencies. Notably, Pakistan's key trading and lending partners, including China and the International Monetary Fund (IMF), have voiced concerns and criticisms about this technology.

Furthermore, the Financial Action Task Force (FATF) has urged Pakistani authorities to enhance their regulatory oversight of the crypto industry. Presently, investors are resorting to a peer-to-peer (P2P) cryptocurrency investment method, allowing them to invest in crypto assets discreetly and without detection (Singh, 2023).

Following is a short comparison of the regulatory framework of cryptocurrency in Pakistan and India.

Regulatory Status in Pakistan

In December 2020, the assembly of Khyber Pakhtunkhwa unanimously passed a resolution to legalize cryptocurrency and crypto-mining. Subsequently, in March 2021, an advisory committee was established. However, the Khyber Pakhtunkhwa government later decided to dissolve this committee in late March 2021, citing the exclusive authority of the federal government to make decisions regarding digital currency. In response to the Financial Action Task Force's (FATF) recommendation to enhance regulation of the crypto industry, the federal government has formed a committee to assess cryptocurrency regulation. This committee includes FATF observers, federal ministers, and leaders from the

nation's intelligence agencies (Prospects of Cryptocurrencies, 2021).

Currently, crypto trading in Pakistan operates in a regulatory grey zone. While it lacks formal regulation, it is not explicitly illegal for the general public. In 2018, the State Bank of Pakistan implemented a 'prohibition' on entities it oversees from engaging in virtual currency transactions, and it 'advised' the public to exercise caution when dealing with cryptocurrencies. The State Bank's reasoning includes concerns about the high price volatility of virtual currencies, the potential for Virtual Currency exchanges to fail or close due to various reasons, including legal actions, and the susceptibility of crypto exchanges and wallet businesses to hacking or security breaches, which has occurred globally resulting in substantial fund losses (Prospects of Cryptocurrencies, 2021).

To circumvent these restrictions, many cryptocurrency traders and investors in Pakistan resort to peer-to-peer (P2P) transactions as a method for funding and withdrawing from their exchange accounts (Prospects of Cryptocurrencies, 2021).

Regulatory Status of Cryptocurrency in India

In April 2018, the Reserve Bank of India (RBI) exercised its authority to prohibit cryptocurrencies, declaring that the central bank would not engage in virtual currencies or offer services to facilitate any individual or entity in transactions involving such currencies. These services encompassed maintaining accounts, registration, trading, settling, clearing, extending loans against virtual tokens, accepting them as collateral, establishing accounts for exchanges dealing with them, and handling the transfer or receipt of funds related to the purchase or sale of virtual currencies (VCs).

Around mid-2019, the Ministry of Finance of India introduced a draft cryptocurrency bill titled 'Banning of Cryptocurrency and Regulation of Official Digital Currency Bill'. This draft proposed a comprehensive ban on all cryptocurrencies except those owned by the government. In March 2020, the Supreme Court of India in *Internet and Mobile Association of India Versus Reserve Bank of India (2020)* overturned the RBI's cryptocurrency ban, leading to a substantial upsurge in cryptocurrency trading activities within the country.

At present, India lacks a legal framework governing the issuance, utilisation, and trading of cryptocurrencies. The Indian Government is presently in the process of formulating legislative guidelines for cryptocurrencies (FPCCI, 2021).

State Bank of Pakistan's Stance on Cryptocurrency

The State Bank of Pakistan (SBP) functions as the central bank of the country and holds the responsibility of upholding the stability and credibility of Pakistan's financial system. In line with this mission, the SBP has been closely observing the increasing prominence of cryptocurrency within the nation, acknowledging both its potential advantages and associated risks.

Given the decentralised nature of cryptocurrencies and their lack of centralised oversight, they often come with associations with unlawful activities like money laundering and the financing of terrorism. To address these potential dangers, the SBP has chosen a careful stance concerning the adoption of cryptocurrency within the country. In April 2018, the SBP released a circular that prohibited banks, financial entities, and payment processors from engaging with cryptocurrency enterprises, referring to the hazards connected to these virtual currencies.

Nonetheless, the SBP's perspective on cryptocurrency has experienced a transformation in recent times, driven by the recognition of potential merits like financial inclusivity and innovation. Policymakers and regulators have acknowledged the ability of cryptocurrencies to deliver financial services to sections of the population currently excluded from conventional banking systems, such as those who are unbanked or underbanked.

Additionally, the SBP has taken note of the potential of blockchain technology, the foundational technology behind cryptocurrencies, to enhance the effectiveness and security of financial transactions in Pakistan. The deployment of blockchain technology has the potential to decrease transaction costs, amplify transparency, and augment the security and privacy of financial transactions.

Despite the potential advantages presented by cryptocurrencies, the SBP remains cautious and watchful in its approach to overseeing this emerging technology. The SBP underscores the necessity for robust regulatory frameworks to

establish a secure and sustainable marketplace for cryptocurrencies within Pakistan. In the subsequent sections, we will delve into an analysis of Pakistan's legal and regulatory framework for cryptocurrencies and explore the challenges that fintech companies encounter as they navigate through this intricate regulatory landscape.

Initial Ban on Cryptocurrency

In April 2018, the SBP issued a circular banning all cryptocurrency-related transactions in Pakistan (State Bank of Pakistan, 2018). The circular stated that cryptocurrencies, including Bitcoin, Ethereum, and Litecoin, were not legal tender in Pakistan and warned the public about the risks associated with their use. The circular prohibited all banks, financial institutions, and payment processors from dealing with cryptocurrency companies.

This circular was challenged in the courts, where SBP took the view of never declaring the currencies illegal (*Waqar Zaka v Federation of Pakistan & Others*, 2019) and in March 2020, the ban was lifted. The court ruled that the SBP had no legal authority to ban cryptocurrency and that such a ban would violate the fundamental rights of citizens. Following this ruling, the SBP has taken steps to regulate cryptocurrency in Pakistan.

Guidelines for Banks and Payment Service Providers

In April 2018, the SBP issued guidelines for banks and payment service providers (PSPs) regarding cryptocurrency-related transactions. The guidelines aimed to protect the financial system from the potential risks of cryptocurrencies, such as money laundering and terrorism financing. The guidelines require banks and PSPs to conduct customer due diligence, implement risk management systems, and report suspicious transactions to the Financial Monitoring Unit (FMU) (State Bank of Pakistan, 2018).

The SBP also requires banks and PSPs to ensure that cryptocurrency transactions do not violate the Foreign Exchange Regulations Act and the Anti-Money Laundering Act. The Foreign Exchange Regulations Act requires that all foreign currency transactions be conducted through authorised dealers, which do not include cryptocurrency exchanges.

The Anti-Money Laundering Act mandates that financial institutions must establish mechanisms to counteract money laundering and the financing of terrorism. These mechanisms encompass practices such as conducting customer due diligence, maintaining comprehensive records, and promptly notifying authorities about suspicious transactions. (State Bank of Pakistan, 2018).

Banks and PSPs are required to report all cryptocurrency transactions to the SBP. Any violation of the guidelines may result in penalties or legal action. The guidelines have created a regulatory framework for cryptocurrency transactions in Pakistan, which has helped to protect the financial system and prevent the illicit use of cryptocurrencies (State Bank of Pakistan, 2018).

Overall, the SBP's guidelines for cryptocurrency-related transactions have provided clarity for banks and PSPs regarding their obligations and responsibilities. The guidelines have also helped to prevent the misuse of cryptocurrencies for illegal activities. However, the guidelines have been criticised for being too strict and hindering the growth of the cryptocurrency industry in Pakistan (Ali, 2022).

Regulatory Sandbox for Fintech Start-ups

The regulatory sandbox has been implemented as part of the SECP's efforts to promote financial inclusion and innovation in Pakistan's financial sector. According to a report by the World Bank, regulatory sandboxes have become a popular tool for regulators around the world to foster innovation in the fintech industry (World Bank, 2020).

The regulatory sandbox is a new concept in Pakistan, and its effectiveness in promoting fintech innovation and growth in the country is yet to be seen. However, similar initiatives in other countries have shown promising results. For example, the Monetary Authority of Singapore's regulatory sandbox has been successful in attracting fintech companies and facilitating innovation in the sector.

To ensure that fintech startups can benefit from the regulatory sandbox, the SBP has provided a comprehensive set of guidelines for interested companies to follow. The guidelines outline the eligibility criteria for fintech startups, the application

process, and the requirements for participating in the sandbox (SECP, 2019).

One of the key benefits of the regulatory sandbox is that it allows fintech startups to test their products and services in a controlled environment, without the risk of harming consumers or the financial system. This enables startups to identify and address any potential issues before launching their products and services in the market, which can save them significant time and resources.

However, some experts have raised concerns about the regulatory sandbox, arguing that it may not be effective in promoting innovation if it is too restrictive. According to a report by the World Bank, a successful regulatory sandbox should strike a balance between enabling innovation and protecting consumers and the financial system (World Bank, 2019).

Overall, the regulatory sandbox is a positive step towards promoting fintech innovation and growth in Pakistan's financial sector. However, its success will depend on the effectiveness of its implementation and the ability of fintech start-ups to meet the regulatory requirements and inclusion of Cryptocurrency into that sandbox.

Future Outlook for Cryptocurrency in Pakistan

The regulatory landscape for cryptocurrency in Pakistan is complex and evolving, with the country taking a cautious approach towards its use. While the State Bank of Pakistan (SBP) has recognised the potential benefits of cryptocurrency, such as financial inclusion and innovation, it has also highlighted the potential risks associated with its use, such as money laundering and terrorism financing (Ibrahim, 2019). To address these concerns, the SBP has issued guidelines for banks and PSPs to manage risks associated with cryptocurrency transactions (State Bank of Pakistan, 2018).

In addition, the SECP has established a regulatory sandbox for fintech startups to test innovative products and services, however, cryptocurrency is not specifically mentioned in the guidelines, under the supervision of the SBP and SECP (SECP, 2019). The sandbox provides a safe and secure environment for fintech startups to test their products and services without being

subject to the full regulatory requirements, thus promoting innovation and growth in the fintech sector.

However, the lack of clarity regarding the legal and regulatory framework for digital currencies creates uncertainty for investors and entrepreneurs in Pakistan. The ambiguity surrounding the status of cryptocurrency has hindered its adoption and development in the country. Nonetheless, there is growing interest in cryptocurrency among Pakistan's youth population, and there are indications that cryptocurrency adoption is on the rise (Ghazia Khoula Qureshi, 2022).

One initiative that may contribute to the growth of digital payments and cryptocurrency adoption in Pakistan is the Raast payment system. Launched by the SBP in 2021, the Raast payment system is an interbank instant payment system that aims to enhance financial inclusion and facilitate digital payments in the country (Pakistan, Raast Payment system, 2021). The system is expected to provide a secure and efficient payment infrastructure for businesses and individuals, including those who may not have access to traditional banking services.

In conclusion, the regulatory landscape for cryptocurrency in Pakistan is still evolving, with the SBP taking a cautious approach towards its use. While the establishment of a regulatory sandbox and the launch of the Raast payment system may contribute to the growth of digital payments and cryptocurrency adoption in the country, the lack of clarity regarding the legal and regulatory framework remains a barrier to investment and innovation.

Legal and Regulatory Issues

In addition to the SBP's stance on cryptocurrency, several legal and regulatory issues must be considered in the development of a comprehensive regulatory framework for digital currencies in Pakistan. This chapter will explore some of these issues, including consumer protection, data privacy, and cybersecurity.

Consumer Protection

The lack of consumer protection in the use of cryptocurrency has been a primary concern for regulatory bodies globally. Cryptocurrencies are not backed by any government or financial

institution, making them vulnerable to fraud, theft, and other illegal activities. The decentralised nature of cryptocurrency also makes it challenging to regulate, making it challenging to protect consumers.

In Pakistan, the SBP has introduced guidelines for banks and payment service providers that offer cryptocurrency-related services. These guidelines require banks and payment service providers to implement strict anti-money laundering (AML) and counter-terrorism financing (CTF) measures, as well as measures to ensure the safety and security of consumer funds. (State Bank of Pakistan, 2018). The SECP has also established a regulatory sandbox for fintech startups to test their products and services under the supervision of the SBP and SECP (SECP, 2019).

However, the lack of a comprehensive legal and regulatory framework for cryptocurrency means that consumers are still at risk of fraud and other illegal activities. The SBP must work with other regulatory bodies and law enforcement agencies to develop a comprehensive legal framework for digital currencies that provides robust consumer protection measures. One possible solution could be the use of smart contracts, which are self-executing contracts with the terms of the agreement between buyer and seller being directly written into lines of code, which would make it possible for consumers to have greater control over their funds (Amna yasir, 2021).

In conclusion, the lack of consumer protection in the use of cryptocurrency is a significant concern that must be addressed through the development of a comprehensive legal and regulatory framework for digital currencies. The SBP's guidelines for banks and payment service providers are a step in the right direction, but more needs to be done to ensure consumer safety and security in the cryptocurrency market.

Data Privacy

The issue of data privacy in cryptocurrency is a growing concern around the world. The decentralised and transparent nature of blockchain technology, on which most cryptocurrencies are built, presents a unique challenge for data privacy. While blockchain technology offers a high level of security and transparency, the public nature of the ledger means that transactions can be traced

back to individual users, potentially exposing sensitive personal information (Christopher Kuner, 2018).

To address this issue, the SBP has taken several measures to ensure that banks and payment service providers implement data privacy and protection measures when offering cryptocurrency-related services. The guidelines require banks and payment service providers to use encryption for customer data and implement regular security assessments to identify and mitigate any potential data privacy risks. Additionally, they are required to have data protection policies and procedures in place to safeguard customer information from unauthorised access or disclosure (Pakistan, Maintaining Secrecy and Fidelity of Customers' Information, 2018).

However, despite these measures, the lack of a comprehensive legal framework for cryptocurrency in Pakistan means that there are still significant data privacy risks associated with the use of digital currencies. This is particularly concerning given the increasing number of data breaches and cyber-attacks targeting financial institutions and their customers.

It is, therefore, imperative for the SBP to work with other regulatory bodies and industry stakeholders to develop a comprehensive legal framework that provides robust data privacy and protection measures for consumers. Such a framework could include provisions for data privacy impact assessments, data breach reporting requirements, and penalties for non-compliance with data protection regulations.

In conclusion, the lack of consumer protection and data privacy are critical issues that need to be addressed in the development of a comprehensive legal and regulatory framework for digital currencies in Pakistan. While the SBP has taken some steps to address these issues through the introduction of guidelines, more needs to be done to protect consumers' interests and ensure that the benefits of cryptocurrency can be realised while minimising the associated risks.

Cybersecurity

The decentralised nature of cryptocurrency also raises significant cybersecurity concerns. The public nature of the blockchain means that transactions are visible to all users, which

creates opportunities for cybercriminals to exploit vulnerabilities and steal funds (Christopher Kuner, 2018).

To address this issue, the SBP has introduced guidelines that require banks and payment service providers to implement robust cybersecurity measures when offering cryptocurrency-related services. These measures include regular security assessments, the implementation of multi-factor authentication, and the use of secure communication channels. (Pakistan, Maintaining Secrecy and Fidelity of Customers' Information, 2018).

However, the lack of a comprehensive legal and regulatory framework for cryptocurrency means that cybersecurity risks associated with the use of digital currencies in Pakistan are still significant. The SBP needs to work with other regulatory bodies and industry stakeholders to develop a comprehensive legal framework that provides robust cybersecurity measures for consumers.

Overall, the legal and regulatory issues associated with the use of cryptocurrency in Pakistan are significant. While the SBP has taken steps to address some of these issues, a comprehensive legal and regulatory framework that provides robust consumer protection, data privacy, and cybersecurity measures is essential for the long-term sustainability and success of the fintech industry in Pakistan.

Implications for the Future of Fintech in Pakistan

The regulatory landscape for cryptocurrency in Pakistan has significant implications for the future of fintech in the country. A supportive regulatory environment could encourage innovation and investment in the fintech sector, while an unfavourable environment could stifle growth and innovation.

The lack of access to financial services and the complex regulatory landscape create significant challenges for fintech companies in Pakistan. However, the regulatory sandbox and other initiatives by the SBP provide hope that a safe and sustainable fintech industry can emerge in Pakistan.

The State Bank of Pakistan's stance on cryptocurrency is evolving, and the regulatory landscape for digital currencies in the country is becoming more favourable for fintech startups. While the initial ban on cryptocurrency raised concerns about the future of digital currencies in Pakistan, the lifting of the ban and the subsequent introduction of guidelines for banks and payment

service providers demonstrate a more positive attitude towards cryptocurrency.

The regulatory sandbox provides a safe and secure environment for fintech startups to test their products and services, including those related to cryptocurrency, under the supervision of the SBP. This initiative has the potential to encourage innovation and investment in the fintech sector and could lead to the emergence of a sustainable fintech industry in Pakistan.

However, the lack of clarity regarding the legal and regulatory framework for digital currencies still creates significant uncertainty for investors and entrepreneurs. The SBP needs to continue to develop a comprehensive and clear regulatory framework for cryptocurrency, which takes into account the potential risks and benefits associated with its use.

In addition, the SBP needs to address the challenges faced by fintech companies in navigating the complex regulatory landscape. The lack of access to financial services and the burdensome regulatory requirements create significant barriers to entry for fintech startups, and addressing these issues is essential for the growth and success of the fintech industry in Pakistan.

Overall, the future of cryptocurrency and fintech in Pakistan is still uncertain, but the SBP's evolving stance on digital currencies provides hope that a safe and sustainable fintech industry can emerge in the country. Policymakers, regulators, and fintech companies need to work together to create a supportive regulatory environment that encourages innovation and investment, while also protecting consumers and ensuring the stability of the financial system.

The development of a comprehensive regulatory framework for cryptocurrency in Pakistan will have significant implications for the future of fintech in the country. This chapter will explore some of these implications, including the potential benefits and challenges of digital currencies, as well as the potential impact on the broader financial industry.

Potential Benefits of Digital Currencies

The development of a regulatory framework for digital currencies in Pakistan has the potential to bring several benefits to the fintech industry. Digital currencies can offer faster, cheaper, and

more secure payment options, which can improve financial inclusion and promote economic growth. In addition, the use of digital currencies can help reduce the reliance on traditional banking institutions, which can lead to a more decentralised and democratic financial system.

Furthermore, the adoption of digital currencies can facilitate cross-border transactions, which can increase trade and investment opportunities for businesses in Pakistan. Digital currencies can also enable more efficient remittance payments, which can benefit families and individuals who rely on these payments for their livelihoods.

Potential Challenges of Digital Currencies

Despite the potential benefits of digital currencies, several challenges must be addressed. One of the most significant challenges is the potential for illegal activities, such as money laundering, terrorist financing, and tax evasion, facilitated by the anonymity and decentralization of digital currencies.

In addition, the lack of regulatory oversight and consumer protection measures can lead to significant financial losses for consumers. Digital currencies are also subject to significant volatility, which can pose significant risks for investors and consumers.

Furthermore, the adoption of digital currencies may require significant investment in technological infrastructure, which can be a barrier to entry for smaller fintech companies. Policymakers and industry stakeholders need to work together to address these challenges and ensure that the adoption of digital currencies is accompanied by robust consumer protection, data privacy, and cybersecurity measures.

Impact on the Broader Financial Industry

The adoption of digital currencies can have a significant impact on the broader financial industry in Pakistan. Digital currencies can disrupt traditional banking institutions and payment systems, which can lead to increased competition and innovation in the fintech industry. This disruption can also lead to new business models and revenue streams for fintech companies.

Furthermore, the adoption of digital currencies can enable the development of new financial products and services, such as decentralised lending and crowdfunding platforms, which can provide access to finance for underserved communities. However, this disruption can also lead to job losses in the traditional banking industry, which can have negative social and economic consequences.

Overall, the development of a regulatory framework for digital currencies in Pakistan has the potential to bring significant benefits to the fintech industry and the broader economy. However, policymakers and industry stakeholders must work together to address the potential challenges and ensure that the adoption of digital currencies is accompanied by robust consumer protection, data privacy, and cybersecurity measures.

Recommendations for Policymakers and Fintech Companies

The development of a comprehensive regulatory framework for cryptocurrency in Pakistan requires collaboration between policymakers and the fintech industry. This chapter will provide recommendations for both groups to navigate the complex regulatory landscape and promote the adoption of digital currencies in a safe and responsible manner.

Recommendations for Policymakers

a) Establish a regulatory sandbox. One of the biggest challenges faced by fintech companies in Pakistan is the lack of clarity and certainty around regulatory requirements for cryptocurrency and blockchain technology. To address this challenge, policymakers should establish a regulatory sandbox, which is a controlled environment that allows fintech companies to test their products and services in a real-world setting, without being subject to the same regulatory requirements as fully operational businesses.

The regulatory sandbox should be designed to provide a safe space for fintech companies to experiment with new technologies and business models, while also ensuring that consumers are protected from potential harm. It should be open to both domestic

and international fintech companies, with clear criteria for admission, monitoring, and evaluation.

b) Clarify the regulatory framework for cryptocurrency. There is currently no clear regulatory framework for cryptocurrency in Pakistan, which has created uncertainty for fintech companies operating in this space. To address this issue, policymakers should clarify the regulatory framework for cryptocurrency, including licensing requirements, AML/CFT obligations, and tax implications.

The State Bank of Pakistan should work with other relevant regulatory authorities to develop a comprehensive regulatory framework for cryptocurrency that provides clear guidance for fintech companies and promotes innovation while also ensuring consumer protection and financial stability.

c) Establish a cybersecurity framework. The use of cryptocurrency and blockchain technology in fintech requires robust cybersecurity measures to protect against cyber threats, including hacking, phishing, and other forms of cybercrime. To address this challenge, policymakers should establish a cybersecurity framework that outlines best practices for fintech companies in the use of cryptocurrency and blockchain technology.

The cybersecurity framework should cover areas such as data protection, network security, incident response, and disaster recovery. It should also establish clear requirements for reporting cybersecurity incidents and breaches to relevant authorities.

d) Promote financial inclusion. Cryptocurrency and blockchain technology have the potential to promote financial inclusion by providing access to financial services for underserved and marginalised communities. To promote financial inclusion, policymakers should take steps to encourage the use of cryptocurrency and blockchain technology in areas such as remittances, micropayments, and peer-to-peer lending.

This could include initiatives such as providing regulatory incentives for fintech companies that focus on financial inclusion, promoting digital literacy, and investing in digital infrastructure in underserved areas.

e) Foster an enabling regulatory environment.

Policymakers in Pakistan must create an enabling regulatory environment that supports innovation and promotes financial inclusion while also protecting consumers and addressing the potential risks associated with digital currencies. This requires a flexible and forward-looking approach that takes into account the rapidly evolving nature of the fintech industry and digital currencies.

To achieve this, policymakers must engage with industry stakeholders and experts to understand the technology and its potential implications fully. Policymakers must also be proactive in identifying and addressing potential risks associated with digital currencies, such as money laundering and terrorist financing, while also promoting innovation and financial inclusion.

f) Promote consumer protection and data privacy.

Consumer protection and data privacy must be at the forefront of any regulatory framework for digital currencies in Pakistan. Policymakers must ensure that consumers have access to accurate information and transparent pricing for digital currency products and services. They must also establish robust data privacy regulations to protect consumers' personal information, prevent identity theft, and safeguard against cyber-attacks.

g) Establish clear legal frameworks. Policymakers must establish clear legal frameworks that define the rights and obligations of all parties involved in digital currency transactions. This includes regulations that address issues such as contract enforcement, dispute resolution, and liability for fraud and theft.

Clear legal frameworks will provide certainty to consumers and businesses, encourage investment, and promote the development of a healthy digital currency ecosystem in Pakistan.

The imperative for policymakers lies in the establishment of unambiguous legal frameworks that delineate the rights and responsibilities of all stakeholders engaged in transactions involving digital currency. This mandates the formulation of regulations that comprehensively tackle concerns like the execution of contracts, mechanisms for resolving disputes, and the allocation of accountability in instances of fraud and theft.

The value of such clearly defined legal structures extends far beyond regulatory compliance. These frameworks bestow a sense of certainty upon both consumers and enterprises, fostering an environment where transactions can occur with confidence. By eradicating ambiguity, these regulations create a fertile ground for investment, inviting financial stakeholders to participate in the digital currency realm with assured legal protections.

The consequences of these established legal frameworks extend to the broader development of a robust digital currency ecosystem within Pakistan. The presence of such regulations catalyses growth and innovation within the sector, as they provide the stability required to attract not only domestic but also international players. Through their foundational role, these frameworks act as a cornerstone for the flourishing of a dynamic and healthy digital currency landscape.

Therefore, the formulation and implementation of explicit legal frameworks prove instrumental in shaping the trajectory of Pakistan's digital currency journey. With regulatory clarity at the core, these frameworks wield the power to instil trust, drive investment, and pave the way for a thriving digital currency ecosystem that benefits all participants.

Recommendations for Fintech Companies

a) Collaborate with policymakers. Fintech companies in Pakistan must work closely with policymakers to ensure that their products and services comply with the regulatory framework. This requires active engagement and dialogue with regulators and other stakeholders to ensure that fintech companies are operating safely and responsibly.

Fintech companies must also educate consumers about the benefits and risks of digital currencies and ensure that their products and services are transparent and easy to use. This will help build trust with consumers and promote the adoption of digital currencies in Pakistan.

b) Address potential risks. Fintech companies must address the potential risks associated with digital currencies, such as money laundering and terrorist financing. This requires robust Know Your Customer (KYC) and Anti-Money Laundering (AML)

procedures, which can help prevent illegal activities and ensure that fintech companies are operating in compliance with the regulatory framework.

Fintech companies must also establish strong data privacy and cybersecurity measures to protect consumers' personal information and prevent cyber-attacks.

c) Invest in technological infrastructure. Investment in technological infrastructure is critical for the adoption and growth of digital currencies in Pakistan. Fintech companies must invest in robust and secure technological infrastructure that can support digital currency transactions and provide a seamless user experience.

Investment in technological infrastructure can also help fintech companies overcome some of the barriers to entry associated with digital currencies, such as scalability and interoperability.

d) Establish robust compliance programs. Fintech companies operating in the cryptocurrency and blockchain space should establish robust compliance programs to ensure that they are complying with all applicable laws and regulations. This includes implementing AML/CFT policies and procedures, conducting regular risk assessments, and training employees on compliance requirements.

Fintech companies should also establish strong partnerships with financial institutions and other regulatory authorities to ensure that they have access to the latest regulatory guidance and updates.

e) Invest in cybersecurity. In recent times, the surge in the adoption of digital currencies and the utilization of blockchain technology have ushered in a distinct set of cybersecurity challenges for fintech companies. As the prevalence of cryptocurrency continues to expand, the susceptibility to cyber threats and attacks like hacking, ransomware, and Distributed Denial-of-Service (DDoS) incidents has grown concurrently.

Amidst this dynamic landscape, it becomes imperative for fintech companies operating within the cryptocurrency and blockchain domain to bolster their cybersecurity measures significantly. A pivotal step involves the establishment of

comprehensive cybersecurity protocols that can effectively counteract these evolving threats.

A central facet of this defence strategy involves the implementation of robust firewalls. These serve as a protective barrier, segregating a company's internal network from external sources. By erecting this digital barrier, fintech entities can effectively thwart unauthorised access attempts, thereby safeguarding sensitive and confidential information.

In the realm of safeguarding sensitive data, encryption emerges as a paramount cybersecurity measure. By converting critical information into a code that necessitates a designated decryption key for deciphering, encryption renders sensitive data indecipherable to unauthorised individuals. This strategic use of encryption presents formidable hurdles for cybercriminals seeking to breach data security.

As the fintech landscape navigates these complex cybersecurity waters, investing proactively in advanced cybersecurity strategies becomes pivotal. By embracing practices such as fortified firewalls and encryption, fintech companies can bolster their defences comprehensively, ensuring the resilience of their operations in the ever-evolving landscape shaped by digital currencies and blockchain technology. In doing so, they not only safeguard their interests but also contribute to the overall security and integrity of the financial technology sector. (Vinden Wylde, 2022).

Intrusion detection systems are another cybersecurity measure that fintech companies should consider implementing. These systems monitor network traffic for signs of malicious activity, such as unusual patterns of data traffic, and can alert the company to potential threats.

To be fully prepared for cyber threats, fintech companies should also establish an incident response plan. This plan outlines the steps to be taken in the event of a cybersecurity breach, including identifying and containing the breach, assessing the damage, and restoring systems and data.

Regular cybersecurity audits can also help fintech companies identify vulnerabilities and areas for improvement. These audits should assess the effectiveness of the company's cybersecurity measures and identify any security gaps that need to be addressed.

f) Focus on financial inclusion. For fintech enterprises operating within Pakistan, the pursuit of financial inclusion transcends beyond mere social responsibility; it emerges as a strategic avenue for business expansion. By actively fostering financial inclusion, these companies can unlock the potential of a substantial unbanked and underbanked demographic, thereby broadening their customer base. Notably, this endeavour presents a dual benefit: it not only widens their market reach but also cultivates customer trust and elevates adoption rates, particularly through the avenue of cryptocurrency.

In the pursuit of this noble objective, fintech entities can engage in collaborations with governmental bodies and other relevant stakeholders. Through concerted efforts, innovative solutions tailored to the unique needs of the unbanked and underbanked population can be conceptualised and developed. These might encompass mobile-centric cryptocurrency wallets, economical remittance services, and an array of financial products designed to cater to the specific requirements of this marginalised segment.

Yet, the scope of financial inclusion extends beyond mere service offerings. Fintech companies can also play a pivotal role in elevating financial literacy and awareness. By directing investments towards educational programs, they can empower consumers with knowledge about the merits of cryptocurrency and its wider implications. In so doing, they not only contribute to fostering informed financial decision-making but also lay the foundation for a more inclusive and financially astute society.

The pursuit of financial inclusion, therefore, stands as both a strategic business opportunity and a transformative force that has the potential to reshape Pakistan's fintech landscape. By embracing this mission with purpose and innovation, fintech companies can not only amplify their growth trajectories but also contribute meaningfully to the socio-economic advancement of the nation.

Conclusion

In conclusion, the dynamic landscape of cryptocurrency regulation in Pakistan recognizes the challenges and opportunities associated with its widespread adoption. State Bank of Pakistan (SBP), as the primary financial regulator, has begun to realise the

potential benefits of financial inclusion and innovation from the beginning caution. However, ongoing challenges include regulatory uncertainty, concerns about illegal activity, and the need to ensure consumer protection, data privacy, and cybersecurity.

Despite the significant increase in cryptocurrency adoption, Pakistan faces challenges in establishing a clear legal framework. The SBP's approach, a combination of advice and restrictions, has drawn criticism and international organizations such as China and the International Monetary Fund (IMF) have expressed concern. The Financial Action Task Force (FATF) has urged Pakistan to strengthen regulatory oversight.

The paper highlights the contrasting regulatory approaches of Pakistan, India and the United States, highlighting different world views on cryptocurrency. In Pakistan, the first ban was lifted, leading to guidelines for banks and payment service providers.

A landscape grows in Pakistan. Consumer protection, data privacy and cyber security issues point to the need for a comprehensive regulatory framework. The lack of government support for cryptocurrencies leaves users vulnerable to fraud, and while the SBP guidelines offer some protection, a broader framework is deemed necessary. Challenges include data privacy concerns due to hindered transparency and ongoing cybersecurity risks due to regulatory gaps.

The concluding remarks emphasised the need for collaboration between policymakers and the fintech industry to create an enabling environment for digital currency adoption. The proposals include creating a regulatory framework, ensuring transparency of the regulatory framework, licensing, combating money laundering and financing of terrorism (CFT), and financial inclusion. Fintech companies are encouraged to collaborate, educate consumers, invest in secure infrastructure, and prioritize cybersecurity to continue to grow. Overall, solving these challenges is considered critical to creating a secure and thriving cryptocurrency industry in Pakistan.

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