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Beyond Mobile Payments: Exploring the Evolution and Future of Fintech

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Abstract:- In today's digital age, FinTech's have become universal, transforming the way individuals conduct financial transactions. However, with the convenience of Fintech also come challenges that users encounter. This book chapter investigates into the changing landscape of Fintech challenges, drawing insights from a comprehensive survey conducted among various respondents

The survey finds three primary obstacles faced by users during Fintech: network issues, time consumption, and privacy concerns. Notably, a significant proportion of respondents reported encountering network-related problems, highlighting the critical role of stable connectivity in facilitating seamless transactions. Moreover, the chapter explores into the foiling experienced by users due to the time-and privacy nature of the payment process, shedding light on the need for streamlined and efficient payment mechanisms.

Building upon the survey findings, the chapter offers valuable insights into potential strategies and solutions to address these challenges. By elucidating practical approaches and technological innovations aimed at enhancing Fintech systems' efficiency and security, the chapter equips readers with actionable knowledge to navigate the digital payment landscape effectively. This study's findings add to academic discussion and have practical implications for policymakers, industry practitioners, and educators.

Keyword:- *Banks, Cost, Efficiency, Digital Payment, Financial Technology.*

I. INTRODUCTION

Financial technology, or fintech, emerged during the tumultuous 2007-2008 financial crisis and has since reshaped the financial services sector by introducing innovative technologies (Goswami, Sharma & Chouhan, 2022). Its primary goal of broadening access to financial services has spurred the creation of novel banking models, including small banks, mobile money services, and payment banks, specifically targeting unbanked individuals. While the Reserve Bank of India (RBI) has provided adaptable regulatory frameworks and the government has supported startup ventures, traditional institutions possess entrenched legacies and infrastructure that are not easily supplanted (Asif et al., 2023).Fintech encompasses the use of technology to enhance finance, thereby amplifying its capabilities, efficiency, and opportunities globally. It has become a dominant force in financial services, insurance, and regulatory domains, fundamentally altering business models, operations, and product offerings through technological advancements (Board, 2020). Moreover, fintech is anticipated to significantly contribute to fostering financial inclusion, with empirical evidence supporting a positive correlation between fintech advancement and financial inclusion (Lyons & Kass-Hanna, 2021).Fintech has expanded rapidly in the twenty-first century, transforming the financial sector landscape and presenting new opportunities and challenges to consumers, businesses, regulators, and incumbents. Fintech can be applied to a variety of financial domains and functions, including payments, lending, wealth management, insurance, capital markets, and cryptocurrency.

➢ *Some Examples of Fintech Applications are:*

- Mobile payment apps like Venmo, PayPal, and Zelle facilitate instant and convenient money transfers.
- Robo-advisors, including Betterment, wealth front, and Acorns, provide automated and personalized investment advice and portfolio management.
- Peer-to-peer (P2P) lending platforms, such as Lending Club, Prosper, and Kiva, connect borrowers and lenders directly and provide alternative financing.
- Investment apps like Robinhood, Etoro, and Coinbase allow users to trade stocks, ETFs, cryptocurrencies, and other assets for low fees and easy access.
- Bitcoin, Ethereum, and Ripple are examples of cryptocurrency apps that use blockchain technology to create decentralized digital currencies and networks.

Fintech, or the use of digital technology to provide financial services, is rapidly changing the financial sector landscape and blurring the lines between financial firms and the financial sector. This represents a paradigm shift that has various policy implications, including foster beneficial innovation and competition, manage risks, broaden monitoring horizons, review regulatory, supervisory, and oversight frameworks, anticipate market structure tendencies, modernize and open up financial infrastructures, ensure public money remains fit for the digital world, pursue strong cross-border coordination and sharing of information and best practices, given the supra-national.

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India has the third largest fintech ecosystem in the world (Chavan, 2022). Fintech has also contributed to greater financial inclusion by making financial services more affordable and accessible to underserved and unbanked populations. Individuals and small businesses can now access credit more easily thanks to digital lending platforms.

Table 1: The Evolution of Fintech Industry

S. No	Year	Event
1	1860	The Pantelegraphy was Invented
2	1880	Using Charge Plates and Charge Coins For Credit
3	1918	The Invention of Fedwire
4	1919	An Important Book Was Published Linking Finance and Technology
5	1950	Diner's Club Introduced a Credit Card
6	1958	American Express Introduced Their Credit Card
7	1960	Quotron Allowed Stock Market Quotes to be Shown on a Screen
8	1966	Telegraph Replaced by the Telex Network
9	1967	First ATM Installed By Barclays Bank
10	1971	NASDAQ Established
11	1982	Evolution of E – Trade and Online Banking
12	2009	Release of Bitcoin
13	2011	Google Pay Send Developed (Google Wallet)
14	2017	Smile To Pay Services Introduced by Alibaba
15	2020	Open Banking Regulations Implemented in Europe
16	2021	Rise of Buy Now, Pay Later (BNPL) Services
17	2022	Central Bank Digital Currencies (CBDCs) Under Development
18	2023	Increased Focus on Cybersecurity in Fintech

Source:www.getsmarter.com

The 21st century saw the explosion of Fintech. Bitcoin's launch in 2009 ignited the cryptocurrency revolution. Mobile payment solutions and biometric authentication methods offered greater convenience and security. Looking ahead, AI, big data, and RegTech promise to further personalize financial services and enhance security

II. FINTECH IN INDIA

India is evolving into a vibrant environment where fintech startups have the potential to burgeon into billion-dollar unicorns. The Indian fintech software market is projected to expand to USD 2.4 billion by 2020, doubling from its current USD 1.2 billion. The transaction value of India's fintech sector was estimated at USD 33 billion in 2016, with forecasts predicting it to soar to USD 73 billion by 2020. In 2015, investors directed their focus towards high-tech hubs, with Bengaluru witnessing eleven VC-backed investment deals amounting to USD 57 million, followed by Mumbai and Gurgaon with nine and six deals respectively. While India's growth trajectory may not match that of its global counterparts, it holds a favorable position thanks to its abundant pool of tech talent, which is both readily available and cost-effective. Fintech services have revolutionized the way businesses and consumers conduct everyday transactions, positioning India as an attractive market on the global stage.

A. Fintech Adoption in India

The adoption of fintech in India has experienced a meteoric rise over the past two years, with the country now boasting the second-highest fintech adoption rate (52%) among 20 economies worldwide, as per EY's FinTech Acceptance Index 2017. This trend extends across all five service categories, with digitally engaged Indian consumers exhibiting adoption rates 50% to 100% higher than the global averages.

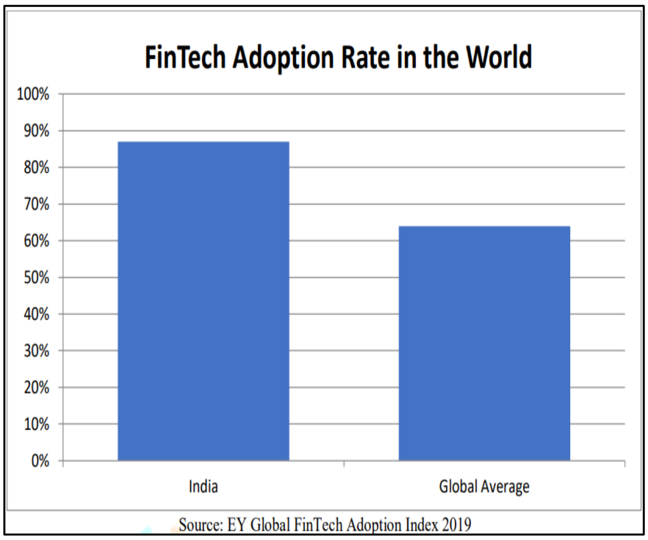

Fig 1: Fintech adoption rate worldwide and India

III. BRIEF REVIEW OF LITERATURE

FinTech has become the latest buzzword in the banking and financial services sector, emerging as a potential disruptor with products and services challenging the traditional stronghold of financial institutions (Gurung, 2018). As traditional financial entities, especially in India, grapple with issues like rising bad loans, customer dissatisfaction, and dwindling public confidence, coupled with fears of a financial crisis, there lies a ripe opportunity for the nascent FinTech players in the Indian financial landscape to make a significant impact. Collaborating with struggling traditional financial institutions could steer the country's financial sector towards a new direction. Thus, the aim of this paper is to explore the potential role FinTech could play in helping India's banking industry regain stability amidst a rapidly evolving landscape.Dubey (2019) delves into the role of AI, augmented reality, and blockchain in digital banking. Augmented reality (AR) technology is gaining momentum across various industries, enhancing process efficiency, cutting costs, and offering commercial benefits in healthcare, construction, retail, manufacturing, among others. Artificial intelligence (AI) stands out as a prominent force in the tech world. Carlin, Olafsson & Pagel (2019) investigate how the release of a mobile app by a financial aggregator aids customers in accessing information and making informed decisions, thus lowering search costs and emphasizing the value of financial information, crucial in retail financial markets.

Vijai's study (2019) reveals that India's financial services sector is undergoing a transformation due to the rapid growth of the fintech industry, projected to double from USD 1.2 billion to USD 2.4 billion by 2020, according to NASSCOM. The traditionally cash-centric Indian economy is embracing fintech, driven by the surge in e-commerce and widespread smartphone usage. Al-Slehat (2023) notes that FinTech companies globally are disrupting the banking industry by offering digital financial services on user-friendly platforms, urging traditional banks to adapt or risk losing competitiveness.Fayolle et al. (2014) categorize studies into various themes such as corporate and national levels, job markets, entrepreneurial intentions, government initiatives, and policy frameworks, reflecting the comprehensive scope of entrepreneurial intention in entrepreneurship studies (Alain & Liñán, 2014). Okello et al. (2018) highlight Uganda's use of mobile money to ensure financial inclusion in rural areas, contrasting with India's lag despite the success of similar services like M-Pesa in Kenya and G-Cash in the Philippines. Considering the strides in fintech, this study aims to envision the future of fintech and its potential to revolutionize the financial industry.

IV. RESEARCH METHODOLOGY

This study examines the increasing use of FinTech in India, through an analysis of both primary and secondary data sources, understanding of the Indian financial landscape and the evolution of FinTech. In addition, the study makes use of a well-designed survey tool withstandardized questions to collect data directly from 130 FinTech customers in India. Through the use of this survey instrument, important details regarding FinTech usage habits, and demographics were investigated.

V. FINDINGS AND DISCUSSION

Demographic analysis indicates that the sample is well-balanced, with respondents evenly distributed across genders. The age distribution within the cohort is diverse, encompassing significant proportions across the 18–30, 31–50, and above 50 years age brackets, reflecting a broad spectrum of FinTech users across different life stages. Regarding educational attainment, the majority (52.72%) holding bachelor's degrees, followed by 25.80% holding postgraduate degrees and 21.48% from different professions. Income levels varied, with 20.91% of the population earning less than ₹20,000 per month, 28.65% earning between ₹20,000 and ₹40,000, 26.64% earning between ₹41,000 and ₹80,000, and 23.80% earning over ₹80,000.

➢ *The Future of Fintech in India:*

Fintech has already triggered a revolution, and Fintech entrepreneurs have begun to disrupt the financial services industry in a variety of ways. Let us now explore the Fintech ecosystem and the Fintech sectors that will drive the next wave of innovation.

- **Blockchains-** Traditionally, transactions needed a third-party validation to take place. Then came blockchains which did away with third part reconciliation and provided cryptographic security. Bitcoins, which use the blockchain technology, have already become a rage. But blockchains are expected to go way beyond just bitcoins, payment transactions, banking industry and foray into various other sectors like media, telecom, travel and hospitality etc.
- **Alternate lending-** Traditional banking industry found it unprofitable to lend to small entrepreneurs. Fintech entrepreneurs took advantage of this opportunity by diving into Peer to peer (P2P) based lending and building web platforms to bring together the lenders and borrowers at lower interest rates. This trend is set to continue and other alternate lending avenues like crowd funding are set to emerge further.
- **Robo advisory-** Earlier intermediaries played an important role between the stock market and the investors. Many times this led to non-traceable and inefficient transactions. Robo advisory will make the stock market easier to access, transparent and traceable and give more value addition to the smarter investors.
- **Digital payments-** Fintech start-ups have increased the speed and convenience of payments. Mobile wallets have already replaced traditional wallets in a lot of places and will penetrate further with better and faster payment options. And yes, ATMs will become redundant too.
- **Insurance sector-** Currently, we can find various online market places where consumers can compare their insurance policies and take prudent decisions. Fintech will further bring in technological revolution in the insurance value chain through automation driven by data and thereby not only reduce the cost of operations but increase the length and breadth of products available in the market.

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Table 2: Top Fintech Companies in India

Ranking	CompanyName	Business Category	City	Total Funding
1	Paytm	Mobile wallet, e-commerce platform and payment bank	Noida	$890M
2	Mobikwik	Mobile wallet, recharge, bill	Gurgaon	$86.8M
		payments		
3	BankBazaar	Online market place providing customized rate quotes on loans and insurance products	Chennai	$80M
4	Policybazaar	Leading online insurance aggregator in India	Gurgaon	$69.6M
5	FINO PayTech	Financial inclusion technology provider	Mumbai	$65M
6	ItzCash	Multi Purpose Prepaid Cash Card	Mumbai	$50.6M
7	Capital Float	Online lending platform for small businesses	Bangalore	$42M
8	Mswipe	PoS terminal for accepting card payments	Mumbai	$35M
9	Ezetap	Payment device maker	Bangalore	$35M
10	Citrus Pay	Payment gateway and mobile wallet	Mumbai	$34.5M

Source: Tracxn. (June 06, 2016). India's 50 Most Well-Funded Fintech Companies

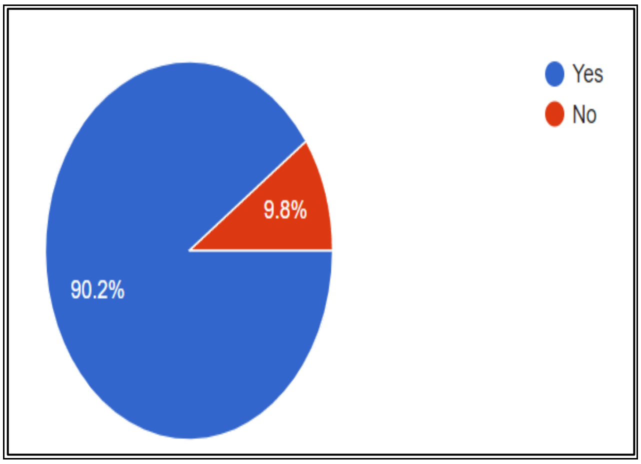

Fig 2: Ever used any Fintech Services

The results of a survey inquiring about individuals' use of fintech services or applications revealed that out of 122 respondents, 90.2% reported using such services, while 9.8% indicated that they had not used till now.Fintech, short for "financial technology," encompasses technologies employed in delivering financial services, such as mobile banking applications, investment platforms, and digital wallets.

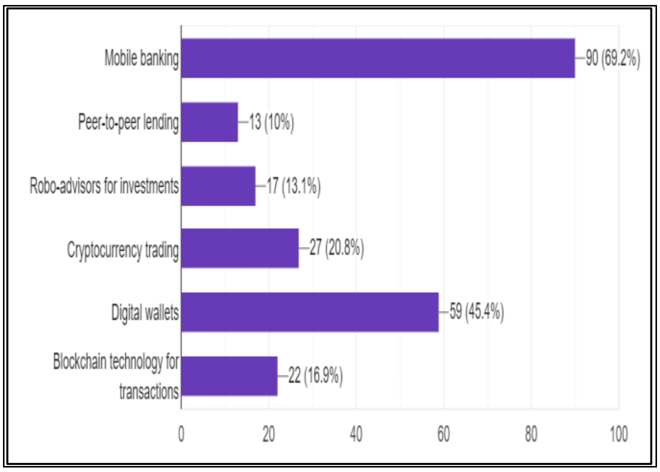

Fig 3: Which Fintech Services are you Currently Using

A survey gauging individuals' interest in or usage of various FinTech services or innovations was conducted, revealing notable trends among 130 respondents. Mobile banking emerged as the top choice, with 69.2% reporting its use. Following closely behind were digital wallets (45.4%) and cryptocurrency trading (20.8%). Conversely, blockchain technology for transactions and Robo-advisors for investments garnered less enthusiasm, with only 16.9% and 13.1% expressing interest, respectively. In summary, the survey highlights the widespread popularity of mobile banking and digital wallets within the FinTech realm, while also indicating that blockchain technology and Robo-advisors are still in the early stages of adoption.

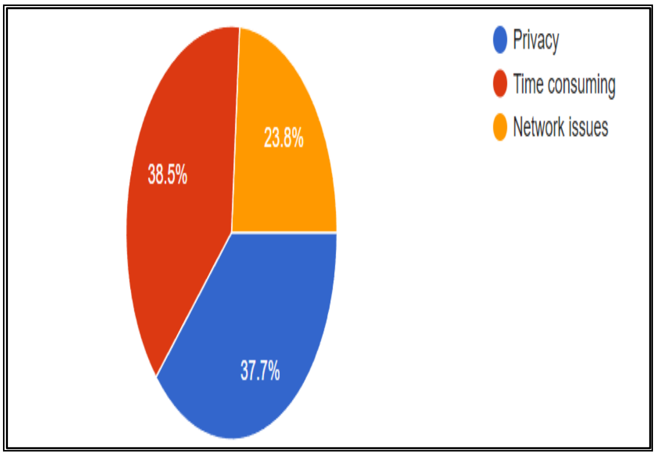

Fig 4: Obstacle facing while using Fintech payments

A survey querying individual regarding the obstacles encountered during online payment transactions unveiled several prevalent challenges among respondents.

38.5% cited network issues as a significant concern during online payments, 37.7% expressed frustration with the time-consuming nature of the payment process.23.8% voiced apprehensions regarding privacy when conducting online payments.In summary, the survey underscores network issues, time consumption, and privacy concerns as the primary barriers impeding smooth online payment experiences.

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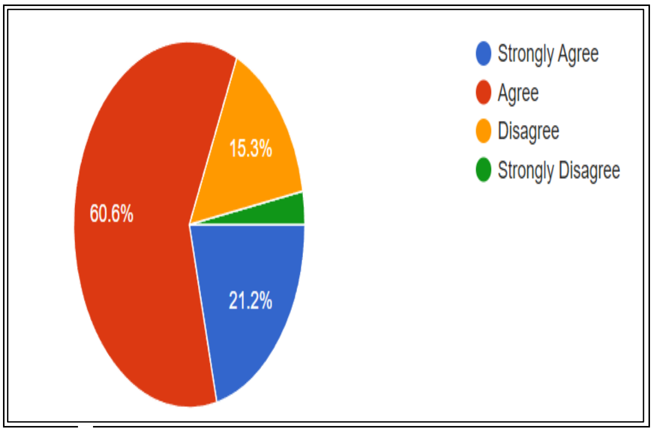

Fig 5: Looking for Ways to Use Financial Technology to Launch a Business

A survey question asking people if they are looking for ways to start a business using financial technology. 60.6% said they strongly agreed or agreed. 21. 2% of respondents disagreed or strongly disagreed. 18.2% of respondents were neutral. This suggests that the vast majority of respondents are interested in using financial technology to start a business.

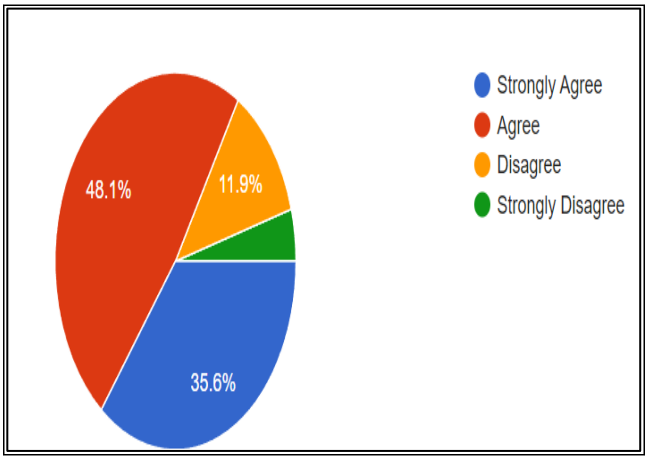

Fig 6: How Easy is Mobile Payments

➢ *A Survey Asking People if they Find Mobile Payments Simple to Use.*

- 48.1% of respondents strongly agreed that mobile payments are simple to use.
- 11.9% of respondents believe that mobile payments are simple to use.
- 35.6% of respondents said they didn't think mobile payments were easy to use.
- 4.4% of those polled strongly disagree that mobile payments are simple to use.

Overall, the survey indicates that the majority of respondents (around 90%) find mobile payments simple to use, with about 10% disagreeing.

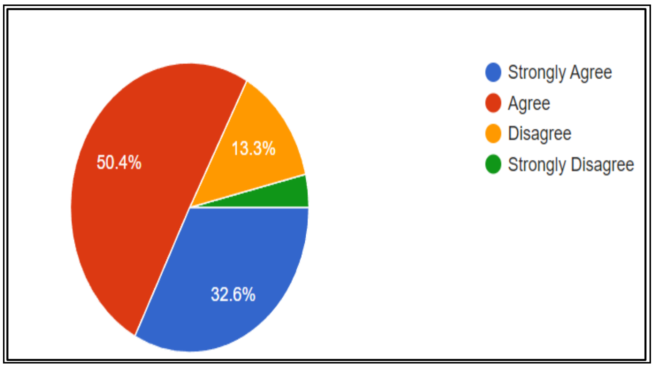

Fig 7: Fintech Convenience

A survey asking people why mobile payments are convenient. The largest segment, 50.4%, agreed with the statement "Mobile payment is convenient because they can use it anytime." This suggests that people find mobile payments convenient because they can be used at any time.

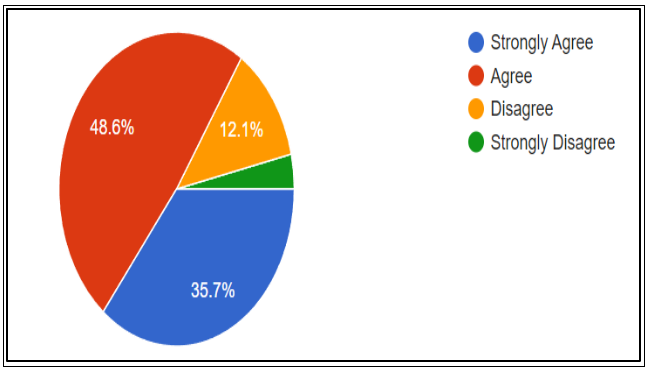

Fig 8: Comparative to traditional payment methods, mobile methods are more convenient

A survey asking people how convenient they find mobile payment methods Overall, the survey indicates that a large majority of respondents (around 80%) believe mobile payment methods are more convenient than traditional payment methods, with approximately 20% disagreeing.

VI. CONCLUSION

The research chapter aims to provide insights into the dynamic environment of the Indian FinTech sector, driven by the erosion of institutional voids and policy interventions. By understanding these dynamics, policymakers and industry stakeholders can make informed decisions to foster further growth and innovation in the sector. The FinTech industry has emerged as a catalyst for innovation and empowerment, creating a fertile ground for aspiring entrepreneurs to thrive. As India continues to experience a FinTech revolution, it is clear that the impact on young entrepreneurs' intentions is profound and far-ranging. The convergence of financial inclusion, increased literacy, and technological innovation has created the conditions for a thriving entrepreneurial ecosystem. However, it is critical to recognise the ongoing challenges, such as regulatory uncertainty and cybersecurity concerns, which require ongoing attention and collaboration among industry stakeholders, policymakers, and educational institutions.

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In essence, this study emphasises the importance of continued exploration and analysis as the FinTech landscape evolves. As the FinTech sector continues to redefine financial services in India, researchers, policymakers, and industry players must collaborate to fully realise FinTech's potential

The study concludes that five factors have been extensively discussed in the literature regarding digital payments, and their presence or absence can have a significant impact on the market According to the survey, the majority of respondents use digital payment apps on their mobile or smart phones and are familiar with digital payments. The survey asked respondents about their level of awareness of transaction security, what security features app providers use, and what the most pressing security issues they face. The majority of respondents stated that they are aware of the security of their payments and chose their apps after carefully reviewing the security features, terms and conditions, and security-related authentications, indicating that this generation is aware of the privacy of their monetary transactions and the risks associated with them. They believe that the use of new technological interventions, such as OTP, SMS, and other modes, reduces the risk of fraudulent financial transactions.

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