

A STUDY ON GREEN BANKING INITIATIVES IN THE BANKING SECTOR: THE DIGITAL TRANSFORMATION OF BANKING SERVICES

Mr. Rahul Thomas¹

¹First Year M.com Student Kristu Jayanti College Autonomous, Bengaluru, 560077, India.

Email Id: 24mcom37@kristujayanti.com

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ABSTRACT

The financial industry has adopted green banking as a sustainable and environmentally friendly method that bridges the gap between technological advancements and environmental awareness. This report examines how green banking activities push sustainability while remaining open to technological advancements, discussing the benefits, risks, and potential future trends in digital change within green banking. Using both qualitative and quantitative methods, the research assesses how digitalization supports environmentally friendly banking activities, such as paperless banking, green loans, and environmentally friendly investment portfolios. The findings show that while digitalization increases the efficiency of green banking, cybersecurity threats and regulatory issues remain the primary concerns.

Its goal is to promote sustainable development by reducing carbon footprints, encouraging eco-friendly investments, and enabling green finance for energy-efficient buildings, green enterprises, and renewable energy projects. Green bank operations include carbon credit trading, energy-efficient stores, green loans, paperless banking, and investments in environmental conservation through corporate social responsibility (CSR) programs. Green banking, which connects financial services with environmental objectives, lowers climate risks while simultaneously boosting stakeholder confidence and long-term profitability. This essay explores the main tactics, benefits, drawbacks, and potential future paths of green banking, emphasizing how it can help create a more robust and sustainable financial system. In order to promote ethical banking practices and investments, green banking initiatives seek to integrate eco-friendly methods into the financial system.

1. INTRODUCTION

This paper examines the convergence of green banking and digital transformation, reviewing their benefits, drawbacks, and opportunities. The banking industry is rapidly changing due to technological advancements and growing environmental concerns. Green banking is about environmentally friendly banking that minimizes carbon footprints and fosters sustainable economic growth. In recent years, green banking has gained momentum as financial institutions try to address climate change, regulatory pressures, and growing consumer demand for sustainability. A policy known as "green banking" aims to reduce environmental damage by incorporating ecologically friendly practices into financial operations. One of the best tactics banks are using to promote green banking is digitalization, which maximizes efficiency and reduces dependency on physical sources. In addition to increasing client pleasure, the move to digital banking products—such as electronic transactions, banking apps for smartphones, and AI-based financial products—also advances sustainability by lowering energy, carbon emissions, and paper use. Investigating the relationship between digitalization and green banking activities, this study aims to demonstrate how technology improvements provide sustainable banking operations.

Two interrelated factors—the need for environmental sustainability and the quick advancement of digital technologies—have had a big impact on the banking industry. This convergence, which has been greatly aided by digital transformation, has given rise to green banking initiatives, which seek to match banking operations with environmental objectives. The integration of artificial intelligence (AI), the use of open banking and APIs, sustainable finance initiatives, improved cybersecurity measures, and the adoption of cloud computing are a few of the more recent advancements.

These developments mark a turning point in the financial sector, where greenness and technology are becoming more and more intertwined. In addition to making banking procedures easier, the use of cutting-edge technologies increases the industry's commitment to sustainability. The purpose of this research is to examine how digitalization affects green banking practices and how new technology is affecting eco-friendly banking practices.

2. REVIEW OF LITERATURE

Munnu Kumar, Nethra Vathi, Rakshita Mouneshwar Allappanavar (2025): Environmental, Social, and Governance (ESG) Supported by Digital Transformation in Banking: A Review Study Journal of Management International, January 2025: Digital banking has changed like nothing else thanks to technology-driven changes and "green" practices that adhere to ESG standards. This study examines the viability of such adjustments and their influence on ESG goals using

original data from in-person interviews with senior authorities handling a variety of functions and a review of the literature. Although based on a small sample size, the findings reveal that digitization enhances decision-making processes across all levels of banking management, supporting sustainability initiatives and fostering societal development. Digital tools have transformed the way banking services are accessed, leading to growth in the industry and responsibility towards the environment.

Dr. S. Chandrasekaran, M. Narayanan (2024): Recent Trends in Banking Services: An Analysis of Green Banking Efforts in the Indian Banking Industry, February 2024 INDO-American College, Publisher, Department of Commerce and Corporate Secretaryship: Investigating current banking service trends with an emphasis on green banking initiatives within the Indian banking industry is the aim of this study. The study intends to advance knowledge of sustainable financial practices and offer insights into the changing banking services landscape by investigating the adoption and effects of environmentally friendly activities. Conceptual Structure: The study's theoretical framework incorporates ideas from financial innovation, corporate social responsibility models, and environmental sustainability theories.

Bouaddi Mohammed, Lahriga Meryem, Beddaa Mohammed (2024): Digital

Transformation of Moroccan Companies and its Impact on Service Quality: A Case of the Banking Sector Nov2024 Journal of marketing: This study aims to investigate the impact of digital transformation on service quality within the Moroccan banking sector, focusing on how these technological advancements influence customer satisfaction and perceptions of service quality. As digital technologies continue to be widely adopted in the banking industry, there is a need to better understand their effects on customer experience, particularly regarding the dimensions of service quality such as responsiveness, reliability, security, and overall satisfaction.

Mrs. S M Suryalakshmi, C. Vijai (2024): Green Banking Initiatives in the Indian Banking Sector Dec 2021 Research Scholar, Assistant Professor, Department of Commerce, St. Peter's Institute of Higher Education and Research, Tamil Nadu, Assistant Professor, Department of Commerce, St. Peter's Institute of Higher Education and Research, Tamil Nadu: Green banking is comparatively a new development in the financial world. It refers to the banking business managed in such a manner that helps for overall reduction of external carbon emission and internal carbon footprint. The concept of green technology is catching up and banks are actively looking for way to portray them as a green bank. It aims to make banking processes and the use of IT and physical infrastructure as efficient and effective as possible, with zero or minimal impact on the environment. Banks offer different channels to access their different banking products and services through ATM, Branch, Mobile banking, Internet banking etc.

Meenakshi Sharma, Akanksha Choubey (2021): Green banking initiatives: a qualitative study on Indian banking sector May 2021 Environment Development and Sustainability: The environmental concern is on rise in all types of business; however, banking assumes a special niche due to its ability to influence the economic growth and development of the country. The present study proposes conceptual model of Green banking initiatives and studies the impact of three Green banking initiatives, viz. green products development, green corporate social responsibility and green internal process on two possible outcomes, viz. Green brand image and Green trust.

Samkutty Samuel, Rupesh Roshan Singh (2023): Climate change: role of banks and financial institutions in greening the banking system Aug 2023: Global warming and climate change are hot topics of environmentalists globally. The World Bank's 'Climate Change Action Plan' for 2021 to 2025 explains the policies and programs to be implemented by banks and financial institutions to combat climate change. The UN and World Bank have taken actions towards achieving minimal carbon emissions that in turn reduce global warming. In India, national-level financial institutions such as RBI, NABARD, SIDBI and Exim Bank took the lead in formulating policies to achieve the goal of greening the banking system. SBI granted financial assistance for windmills and kick-started green financing activity, followed by all other banks

3. STATEMENT OF THE PROBLEM

Green banking has emerged as a crucial means for financial organizations to achieve economic development and improve ecological sustainability. Banks have begun implementing technology-enabled solutions to streamline service delivery and lessen their environmental impact as a result of the banking industry's rapid digital innovation. However, adopting green banking initiatives is fraught with several obstacles that limit its effectiveness.

The lack of awareness and understanding of green banking practices among consumers and banking institutions is one of the primary problems. Due to a lack of awareness and involvement, banks struggle to implement sustainable policies. Furthermore, although digitalization improves banking efficiency, it also brings up problems like cybersecurity risks, some consumer groups' financial exclusion, and the environmental impact of digital infrastructures like energy-intensive data centers.

Furthermore, financial limitations and regulatory requirements prevent banks from fully implementing green banking. Adoption rates are slow since most institutions find it challenging to be profitable while still being sustainable. Furthermore, there is a gap in the measurement of green banking's true contribution to economic expansion and environmental preservation, making it impossible to assess its effectiveness or improve its tactics. Therefore, this study will examine how digital transformation supports green banking initiatives, identify important obstacles, and offer solutions for effective execution. This study aims to provide insights into how banks may integrate green banking policies into their digital operations to combine sustainability with financial and regulatory obligations by analyzing current trends and obstacles.

4. OBJECTIVES OF THE STUDY

- To identify challenges faced by banks in implementing green banking initiatives through digital mean
- To assess the impact of digital banking services on environmental sustainability
- To study the customer perceptions and adoption of green digital banking services
- To compare green banking practices across different regions

5. SCOPE OF THE STUDY

As part of the banking industry's digital revolution, this study focuses on green banking activities. It demonstrates how banks use technology-based solutions to be more sustainable while still being efficient and providing better customer service. Paperless banking, electronic payments, green loans, and sustainable investment strategies are among the various green banking practices covered in the study. Commercial banks, financial institutions, and regulatory frameworks that influence the adoption of green banking are all included in the study. The study examines the obstacles to adoption in banks, such as technological problems, regulatory compliance, financial constraints, and client awareness. The study also looks at how digital banking operations affect the environment, including cybersecurity and data center energy use.

In order to provide a comparative perspective, the research is geographically based on banks in both developed and emerging regions. The findings are meant to offer insights into policy recommendations, best practices, and tactics for increasing the adoption of green banking in the digital era.

6. RESEARCH METHODOLOGY

Data collection

This project involves the use of both primary and secondary data

- (a) Primary data: Primary data refers to data that we have directly collected from first hand sources. Questionnaires are used to gather such information.
- (b) Secondary data: Research data that has previously been gathered and is accessible to researchers is referred to as secondary data. Secondary data comes from publications like journals, papers, periodicals, and other sources.
- (c) Sampling Design: The study's sample is made up of about 29 males and 36 women. 65 samples overall

Sampling method: Tools for analysis: When analyzing data, SPSS tools are used for the analysis of data

Data Analysis Techniques:

Descriptive Statistics: Mean, Median, Mode: To measure the central tendency of responses.

Factor Analysis: To identify underlying factors influencing green banking adoption.

7. LIMITATIONS OF STUDY

1. **Sample Size and Demographic Constraints:** The study might be limited by the availability and diversity of respondents, which could result in biases based on geographic location, age group, income level, and cultural background. The findings might not hold true for every member of each generation.
2. **Self-Reported Data Bias:** The study uses primary data sources obtained through questionnaires and secondary data sources, which could have an impact on the data's reliability due to respondent bias, false self-reporting, or recall problems.
3. **Reliability of Secondary Data** – Some of the data used, especially from reports and prior studies, may be outdated or lack consistency, affecting the accuracy of findings.
4. **Technological and Regulatory Differences** – The adoption of green banking and digital transformation varies across countries due to differences in technology, regulations, and economic conditions, which may limit the generalizability of the study.

8. DATA ANALYSIS AND INTERPRETATION

8.1 Gender of the Respondents

Gender	Frequency (Count)	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)			
Male	26	41.94%	26	41.94%			
Female	36	58.06%	62	58.06%			

Source: Primary Data

As per the table:

There are 26 male respondents (41.94%) and 36 female respondents (58.06%). The cumulative frequency reaches 62, meaning the dataset includes responses from 62 individuals. The majority of respondents are female (58.06%), indicating higher participation or interest in the topic among women. Since females make up a larger portion of the dataset, their preferences, concerns, and opinions may have a stronger influence on the overall findings. If gender plays a role in banking behavior (e.g., preference for security, digital banking adoption, or environmental awareness), this distribution might impact the conclusions drawn from the study.

8.2 Occupation of the Respondents

Occupation	Frequency (Count)	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)			
Student	38	61.29%	38	61.29%			
Employed	12	19.35%	50	80.64%			
Self-Employed	6	9.68%	56	90.32%			
Retired	6	9.68%	62	100.00%			

Source: Primary Data

As per the table:

The majority of individuals in this dataset are students (37 out of 63), making up the largest category. This suggests that a significant portion of the surveyed group consists of younger individuals who are still in the education phase. Employed individuals appear twice in the dataset, with a total count of 14 (12 + 2). This indicates that a notable portion of the group is actively working in job. There are 6 retired individuals, meaning they form a smaller but noticeable portion of the group. This suggests that a segment of the surveyed population has completed their working years.

There are 6 self-employed individuals, showing that entrepreneurship or independent work is a choice for a smaller subset of the group.

By looking at cumulative frequency, we see that:

1. The first 12 individuals are employed.
2. Adding retirees brings the total to 18.
3. Including self-employed individuals raises the total to 24.
4. Students contribute the largest jump, reaching 61 out of 63.
5. The last 2 individuals are also employed, making a total of 63 in the dataset.

8.3 Are you familiar with the concept of Green Banking?

Response	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Yes	39	60.94%	39	60.94%
No	25	39.06%	64	100%

Source: Primary Data

As per the table:

(Yes - 60.94%) A significant portion (39 out of 64 respondents) is familiar with Green Banking. This suggests a moderate level of awareness in the surveyed group. (No - 39.06%) 25 respondents are unaware of Green Banking. This indicates that further awareness campaigns may be necessary to educate the remaining population. The first row (Yes) accounts for 60.94% of the total responses. After adding "No" responses, the cumulative percentage reaches 100%, covering all respondents.

8.4 Which of the following Green Banking initiatives are you aware of?

Initiative	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Paperless Transactions	41	64.06%	41	64.06%
E-statements	29	45.31%	70	109.38%
Use of renewable energy	22	34.38%	92	143.75%
Financing eco-friendly projects	15	23.44%	107	167.19%
Waste reduction	17	26.56%	124	193.75%

Source: Primary Data

As per the table:

Paperless Transactions (64.06%) A majority of respondents (41 out of 64) are aware of paperless transactions, making it the most recognized Green Banking initiative. This suggests that digital banking practices are widely known and adopted.

E-statements Awareness (45.31%) 29 respondents mentioned e-statements, indicating moderate awareness of electronic documentation in banking. This aligns with the increasing trend of banks shifting from paper-based statements to digital formats.

Use of Renewable Energy (34.38%) 22 respondents acknowledged banks using renewable energy, showing awareness of sustainability in physical banking infrastructure. This suggests that some banks have promoted their green energy initiatives effectively, but there is room for more awareness.

Financing Eco-Friendly Projects (23.44%) 15 respondents were aware of banks funding green projects. This relatively lower recognition suggests that financial institutions need to enhance communication on their sustainability financing efforts.

Waste Reduction Awareness (26.56%) 17 respondents identified waste reduction efforts by banks.

8.5 Do you prefer banks are involved in environmentally sustainable practices?

Response	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Yes	54	84.38%	54	84.38%
No	10	15.62%	64	100%

Source: Primary Data

As per the table:

Strong Preference for Sustainable Banking (84.38%) A significant majority (54 out of 64 respondents) prefer that banks engage in environmentally sustainable practices.

Minority Opposition (15.62%)

Only 10 respondents do not prefer banks being involved in environmental sustainability.

This could be due to a lack of awareness, skepticism about green banking initiatives, or concern over potential costs associated with sustainable banking.

After accounting for all "Yes" responses, the cumulative frequency reaches 54 (84.38%).

Adding "No" responses brings the total to 64 (100%), covering all respondents.

8.6 How likely are you to switch to a bank that offers more Green Banking services

Response	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Very Likely	14	21.88%	14	21.88%
Likely	22	34.38%	36	56.26%
Neutral	12	18.75%	48	75.01%
Unlikely	7	10.94%	55	85.95%
Very Unlikely	6	9.38%	61	100%

Source: Primary Data

As per the table:

Majority tends towards Switching (56.26%) 36 out of 64 respondents (21.88% Very Likely + 34.38% Likely) are open to switching to a bank that offers more Green Banking services. This suggests a strong preference for sustainability in banking choices, with over half the respondents indicating they would consider switching, Neutral Respondents (18.75%) 12 respondents are undecided about switching. This group represents potential customers who might be swayed with more awareness or incentives for Green Banking services, Unlikely or Very Unlikely to Switch (20.32%) 13 respondents (7 Unlikely + 6 Very Unlikely) would not switch to a Green Banking provider. By adding Very Likely and Likely responses, we see that over half (56.26%) of the respondents are inclined to switch. Including Neutral responses brings the total to 75.01%, meaning only 24.99% are firm in not switching.

8.7 What improvements would you suggest for digital green banking?

Suggested Improvement	Frequency	Percentage (%)	Cumulative Frequency	Cumulative percentage
Better security measures	21	32.81%	21	32.81%
Increased promotion of environmental	17	26.56%	38	59.37%
More user-friendly digital platforms	15	23.44%	53	82.81%
More financial incentives for green banking users	11	17.19%	64	100%

Source: Primary Data

As per the table:

Security Concerns Are the Primary Focus (32.81%) The highest number of responses (21 out of 64) suggest improving security measures in digital green banking. This indicates that many users perceive data protection and cyber risks as key barriers to fully adopting digital green banking services. Need for Better Promotion of Green Banking (26.56%) 17 respondents recommended increased awareness of environmental benefits associated with green banking. This suggests that banks need to enhance communication strategies to educate users about sustainability and encourage adoption. Demand for Improved User Experience (23.44%) 15 respondents highlighted the importance of user-friendly digital platforms for green banking. This indicates that accessibility, ease of use, and efficient online banking services are critical to increasing adoption rates. Financial Incentives as a Motivator (17.19%) 11 respondents recommended offering financial rewards or incentives to customers who engage with green banking initiatives. This suggests that monetary benefits, such as discounts, lower fees, or interest incentives, could drive customer participation in sustainable banking practices.

8.8 Which of the following digital banking services do you use regularly?

Digital Banking Service Used Regularly	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Frequency
Mobile Banking App	29	28.71	29	28.71%
Internet Banking	24	23.76%	53	52.47%
Digital Wallets (e.g., PayPal, Google Pay, etc.)	22	21.78%	75	74.25%
Virtual Customer Support (Chatbots, etc.)	11	10.89%	86	85.14%
Online Loan Application	5	4.95%	91	90.09%
Other	10	9.90%	101	100%

Source: Primary Data

As per the table:

Mobile Banking Apps Are the Most Used (28.71%) The most frequently used digital banking service is mobile banking apps, with 29 out of 101 responses. This highlights a strong preference for mobile banking, likely due to convenience, ease of access, and 24/7 availability. Internet Banking Is the Second Most Popular (23.76%) 24 respondents regularly use internet banking, suggesting that many users still prefer desktop-based banking experiences for transactions and account management. Digital Wallets Usage Is Significant (21.78%) 22 respondents regularly use digital wallets like PayPal, Google Pay, etc. This shows a growing trend in cashless transactions and contactless payments, which are gaining popularity for e-commerce and peer-to-peer transactions. Virtual Customer Support Has Moderate Adoption (10.89%) 11 respondents use chatbots and AI-driven customer support regularly. While this technology is improving, some users may still prefer human interaction for complex banking queries. Online Loan Applications Are Used Less (4.95%) Only 5 respondents use online loan applications, indicating that customers may still prefer in-person consultations for financial products. Other Services Account for 9.90% 10 respondents mentioned alternative digital banking services, suggesting a diverse range of user preferences outside traditional services.

8.9 What are the primary reasons you use digital banking services?

Primary Reason for Using Digital Banking Services	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Convenience and Ease of Use	22	29.73%	22	29.73%
Time-Saving	18	24.32%	40	54.05%
Security	10	13.51%	50	67.57%
Eco-Friendliness	9	12.16%	59	79.73%
Combination (Convenience, Time-Saving, Security, Eco Friendliness)	9	12.16%	68	91.89%
Other	6	8.11%	74	100%

Source: Primary Data

As per the table:

Convenience and Ease of Use is the Top Reason (29.73%) 22 out of 74 respondents primarily use digital banking because of ease of access and user-friendly interfaces. This suggests that banks should prioritize user experience (UX) improvements and accessibility enhancements. Time-Saving is the Second Most Important Factor (24.32%) 18 respondents chose time efficiency as a key benefit. This highlights the importance of fast transactions, quick processing times, and seamless digital experiences. Security Matters to 13.51% of Respondents 10 respondents prioritize security in digital banking. This indicates that banks should continue investing in fraud detection, encryption, and cybersecurity measures. Eco-Friendliness Motivates 12.16% of Users 9 respondents use digital banking for its environmental benefits, such as reducing paper usage. This suggests that banks should market their green banking initiatives more aggressively. A Combination of Factors Influences 12.16% of Users 9 respondents cited multiple reasons, showing that digital banking offers a holistic value proposition. "Other" Reasons Account for 8.11% of Responses 6 respondents mentioned unique factors not listed in the main categories.

8.10 How satisfied are you with the digital transformation efforts of your current bank

Satisfaction Level	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Very Satisfied	17	27.42%	17	27.42%
Satisfied	22	35.48%	39	62.90%
Neutral	12	19.35%	51	82.25%
Dissatisfied	7	11.29%	58	93.54%
Very Dissatisfied	4	6.45%	62	100%

Source: Primary Data

As per the table:

Majority of respondents (62.90%) are either "Very Satisfied" or "Satisfied" 39 out of 62 respondents have a positive perception of their bank's digital transformation efforts. This indicates that banks are making significant progress in digital innovation and customer satisfaction. 19.35% of respondents remain Neutral 12 respondents neither praise nor criticize digital efforts. Banks might need to enhance their engagement and communicate digital advancements more effectively. 17.74% of respondents are Dissatisfied or Very Dissatisfied 7 respondents are Dissatisfied, and 4 respondents are Very Dissatisfied. This minority group highlights areas for improvement, such as app performance, security, or additional features.

8.11 What further measures would you recommend for integrating Green Banking initiatives with digital transformation in the banking sector?

Recommended Measure	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Introduction of eco-friendly financial products	17	27.42%	17	27.42%
Increased use of renewable energy for digital banking operations	16	25.81%	33	53.23%
Improved customer education and awareness	16	25.81%	49	79.04%
Other (Regulatory frameworks)	10	16.13%	59	95.17%
Stronger regulatory frameworks	1	1.61%	60	96.78%

Source: Primary Data

As per the table:

Most respondents (27.42%) recommend the introduction of eco-friendly financial products This includes green loans, sustainable investment options, and carbon-neutral credit cards. Indicates that customers desire financial products aligned with sustainability goals. 25.81% suggest increasing the use of renewable energy in digital banking operations Highlights the importance of reducing the carbon footprint of banking infrastructure. Banks can focus on solar-powered data centers, sustainable server farms, and green energy for ATMs. Another 25.81% emphasize customer education and awareness Reflects the need to inform customers on green banking benefits and digital tools. Banks should enhance marketing, digital campaigns, and educational initiatives. 16.13% provided "Other" responses, which include unique suggestions like stronger sustainability policies Regulatory policies and frameworks were also mentioned, but with a lower frequency (1.61%). Indicates some demand for government-backed initiatives and industry-wide sustainability guidelines.

8.12 Have you experienced security issues while using Digital Banking Services

Response	Frequency	Percentage (%)	Cumulative Frequency	Cumulative Percentage (%)
Yes	27	42.19%	27	42.19%
Maybe	14	21.88%	41	64.07%
No	23	35.94%	64	100%

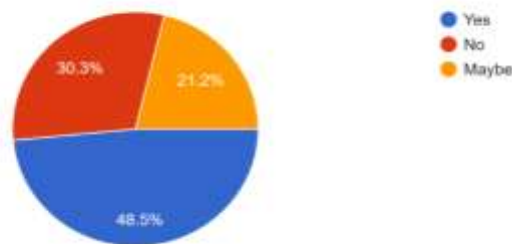
Source: Primary Data

As per the table:

42.19% of respondents have experienced security issues This suggests that a significant number of users have encountered fraud, hacking, phishing, or unauthorized transactions. Indicates a need for stronger cybersecurity measures, better fraud detection systems, and enhanced customer security awareness. 21.88% of respondents are

uncertain ("Maybe") These users might have encountered suspicious activities but were not sure whether they were actual security threats. Highlights the need for improved communication from banks on identifying and reporting security concerns. 35.94% of respondents have never faced security issues This is a positive sign, indicating that a substantial portion of users feel safe using digital banking. However, given that a combined 64.07% (Yes + Maybe) have some security concerns, banks still need to prioritize security improvements.

Have you experienced security issues while using Digital Banking Services
66 responses



9. FINDINGS

Key Findings:

Green Banking Awareness:

45 users (approximately 68%) know about Green Banking, and 21 (32%) don't.

Implication: While awareness is fairly high, educating the remaining 32% may enhance take-up.

Most Used Digital Banking Services:

Most used services are:

Digital Wallets (PayPal, Google Pay, etc.) – 34 users

Mobile Banking Apps – 31 users

Internet Banking – 31 users

Virtual Customer Support (Chatbots, etc.) – 14 users

Implication: Banks need to focus more on developing digital wallet and mobile banking features along with enhancing chatbot-based customer service.

Key Digital Banking Reasons to Use:

Best reasons are: Time efficiency (36 users) Ease of access and convenience (35 users) Environmental sustainability (28 users) Security (21 users)

Satisfaction with Digital Revolution: 41 customers (64%) are very satisfied or satisfied, whereas 11 (17%) are not satisfied.

Security Issues Faced:

32 users (48%) faced security issues, and 14 (21%) were not sure.

Implication: Security issues are still a problem. Banks need to emphasize more robust authentication, fraud detection, and customer awareness.

10. CONCLUSION

The research sought to analyze the incorporation of Green Banking programs under the context of digital transformation in banking, gauging customers' awareness, adoption, satisfaction, and main concerns for digital banking services. The findings reveal that a considerable number of customers (68%) are aware of Green Banking programs, reflecting a positive level of awareness. Nonetheless, a remarkable 32% are yet to hear of these initiatives, implying that banks have to improve their outreach processes to inform all clients.

Virtual customer support via chatbots was also not as prevalent, which implies that though bank services through AI are expanding, customers prefer old-school means of support. Most customers (64%) are satisfied or highly satisfied with the digital transformation of their banks, which indicates a successful shift to digital banking. Yet, an impressive minority (17%) are dissatisfied, indicating scope for improvement in some areas like system reliability, security, and customer service. The report concludes that while digital banking has been able to revolutionize banking services, there is an urgent need for enhanced security, adoption of Green Banking, and customer education.

In order to achieve sustained success, banks must Increase awareness and education regarding Green Banking and its advantages. Step up security arrangements to alleviate customer fears. Create and market green financial products to promote sustainable banking. Utilize renewable energy and green technologies in banking activities. Through these measures, banks can effectively combine digital transformation with sustainability initiatives, providing a safe, efficient, and environmentally friendly banking industry for the future.

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