

## Internet Banking Services and Secured Customer Usage Analysis with Reference to IDFC First Bank

<sup>1</sup>Dr. Savita Trivedi; <sup>2</sup> Ms. Nivedha R; <sup>3</sup>Ms. Veronica Evangaline

<sup>1</sup>Professor, <sup>2</sup>Research Scholar, <sup>3</sup>Research Scholar  
<sup>1,2,3</sup> Dayananda Sagar Institutions, Bangalore, India

### Abstract

The banking sector has witnessed a remarkable transformation with the advent of digital technologies, and internet banking is providing a pivotal service in this digital era. As financial institutions adapt to the evolving needs of their customers, internet banking has become an important part of modern banking. This study evaluates the effectiveness of IDFC First Bank's digital initiatives. The findings show that internet banking has enhanced service accessibility convenience, increased customer satisfaction and fostering financial inclusion, especially in under banked regions. However, there are some challenges too such as technical issues and the need for customer data security and support. The study concludes with highlighting the need of service quality, bolstering security measures, and improving customer education and support. By addressing these challenges, IDFC First Bank can further optimize its internet banking services, contributing to a more inclusive and efficient banking ecosystem. This research provides some actionable insights for continuous improvement in the digital financial services sector.

**Key words:** Introduction-IDFC, Internet Banking, Future outlook, Data Analysis, Findings & Conclusion

### Introduction

Internet banking refers to the use of internet-based platforms to perform various banking activities such as account management, fund transfers, bill payments, and more. The concept of internet banking emerged in the late 20th century and has since evolved significantly. Early implementations were limited in functionality, but advancements in technology have enabled a comprehensive range of services that can be accessed remotely and securely. India has experienced a rapid digital transformation over the past decade, driven by widespread internet penetration and the government's push for a digital economy. The introduction of initiatives such as Digital India, along with the proliferation of smart phones, has accelerated the adoption of digital banking services. Internet banking has become a key driver in this transformation, offering convenience, efficiency and accessibility to millions of customers. Financial inclusion is a critical goal for developing economies like India. It involves providing access to affordable and convenient financial services to all segments of society, particularly the underserved and marginalized groups. Internet banking plays a crucial role in achieving

financial inclusion by offering accessible banking services that can be accessed anytime and anywhere. This has the potential to empower individuals, support economic growth, and reduce poverty. This study focuses on the impact of internet banking services provided by IDFC First Bank, a leading private sector bank in India, on societal banking habits, financial inclusion and customer satisfaction.

### **Idfc First Bank: A Digital Pioneer**

IDFC First Bank, established in 2015, has quickly emerged as a significant player in the Indian banking sector. The bank's digital transformation activities began with a strong focus on leveraging technology to enhance customer experience and streamline banking operations. IDFC First Bank has introduced a series of internet banking services designed to meet the diverse needs of its customer base, which includes account management, transfer of funds, bill payments and investment services. The societal impact of internet banking extends beyond convenience and efficiency. Internet banking has the potential to reshape financial behaviours, promote financial literacy, and bridge the gap between urban and rural banking services. By providing easy access to banking services, internet banking can enhance financial inclusion, enabling under banked and unbanked populations to participate in the formal financial system. This study aims to analyse the extent to which IDFC Bank's net banking services have influenced customer behaviour, enhanced service quality and contributed to broader financial inclusion. By examining customer feedback, adoption trends and the challenges faced in the digital banking ecosystem, the study provides insights into the transformative effects of net banking and offers recommendations for further improvement.

In order to finance infrastructure projects in India, IDFC Limited was established in 1997. The business eventually expanded into investment banking, institutional broking, and asset management.

IDFC Bank started operations on 1 October 2015. The merger between IDFC Bank and Capital First, a non-banking financial organisation, was announced in January 2018. Vaidyana than formed Capital First in 2012 after acquiring a portion of Future Capital Holdings and obtaining equity backing of Rs. 8.10 billion from Warburg Pincus. Capital First was granted an enhanced AAA long-term credit rating in 2018. It was a non-bank financial institution in India that gave small and medium-sized businesses debt funding. In September 2023, the institutional holding is at 24.48, the public holding is at 26.02, and the promoter holding is at 40.00 at the bank.

### **Internet Banking Service**

Internet banking refers to the use of the internet to conduct various financial transactions and banking activities remotely. It helps customers to access their bank accounts, manage their finances and perform a range of banking operations using an internet-enabled device such as a computer, smartphone, or tablet. This service provides a convenient alternative to traditional banking methods, enabling customers to interact with their bank anytime and anywhere.

Internet banking reduces the need for physical infrastructure and manual processing, lowering operational costs for banks and often resulting in lower fees for customers.

The integration of internet banking into the global financial landscape has fundamentally altered how customers access and manage their finances. While the benefits of internet banking are clear, its widespread use comes with significant security risks. These risks, ranging from cyber attacks to fraud, multi-factor authentication and biometric verification, to protect customers. Furthermore, the growing use of emerging technologies, such as AI, machine learning, and block chain, promises to improve the security of internet banking systems and offer new ways to protect customer data and financial transactions. As both banks and customers continue to navigate the digital banking ecosystem, the evolution of security measures will play an important role in maintaining customer trust and ensuring the sustainability of net banking services.

### **Review of Literature**

Some literatures are reviewed to get a clear insight about e-banking. These are as follows-

Dr. Rambabu Gopisetti & P. Bikoj (IJRAR November 2022) concluded that digitalization has become conclusive for the e-banking sector in India, which plays a major role in providing better services to customers. Internet banking is one of the most significant banking channels that allow consumers to do many transactions, either financial or non-financial through a bank's websites. The various services offered are Internet banking, SMS banking, ATMs, Mobile-banking, e-cheques, UPI, and debit/credit cards. In today's world of globalization, e-banking is a significant aspect of the development of the e-banking sector by solving major issues, challenges faced by e-banking.

Dangwal, R.C. (2010) says that technology is growing rapidly and undergoing many changes. It indicates the unification of communication technology, information systems, and innovative applications to product manufacturing, design, and control. With the advancement in technology, the world has become a global village and ushered in a revolution in the-banking sector.

Seranmadevi, R (2012) says that various e-Banking can be attractive to potential customers in terms of improved accessibility, affordability, and ease of use. It also focuses on the functionality of electronic credit cards, frequency of usage, mode of repayment, value addition facilities offered along the credit cards for different client groups.

Laukkanen (2014) highlighted that while internet banking adoption is prevalent globally, regional differences exist on infrastructure, literacy levels and regulatory frameworks. In countries like Europe and North America, the adoption rate is higher compared to emerging markets where issues like digital literacy and trust pose barriers.

Chiou & Shen (2014) explored the effectiveness of various authentication methods, such as two-factor authentication (2FA) and biometric authentication, in securing internet banking services. The study found that multi-layered security, including both passwords and biometric measures (like fingerprint or facial recognition), significantly improves the security of online transactions.

Kesharwani & Bisht (2015) explored how digital literacy impacts the adoption of internet banking, particularly in developing countries. They identified that lower levels of digital literacy act as a barrier to the adoption of net banking in some countries like India, where many users still prefer traditional banking methods due to unfamiliarity with digital platforms. Chauhan, V. & Chaudhary V. (2015) study has focused on understanding the concept of internet banking and its benefits from the perspective of consumers as well as banks and the current scenario of internet banking. The growth percentage of mobile-banking from 2010 to 2014 had been the highest that is 495.64 percent while credit cards had seen the least growth from the same period at 11.07 percent. NEFT and RTGS transactions were at 602.69 percent and 89.29 percent respectively. They concluded that most of the banks have implemented e-banking facilities that are beneficial both for the consumers and the banks but then there are issues of safety, security, and reliability which the banks must adhere to.

Singh & Jain (2016) highlighted the importance of encryption in securing online banking transactions. Their research shows that most modern banking platforms use Secure Sockets Layer (SSL) and encryption algorithms to protect data during transmission, thereby reducing the risk of man-in-the-middle attacks.

Laukkanen (2017) says that the rise of mobile banking apps has further transformed customer behaviour found that customers are now more likely to use mobile banking services due to the proliferation of smartphones, with apps offering enhanced features like biometric security, personalized notifications, and real-time account management.

Gefen (2018) emphasized the role of trust in the online environment, particularly when it comes to financial transactions. Many customers perceive internet banking as risky due to concerns over privacy, fraud, and hacking. Gefen's work is foundational in understanding that trust is built not only through robust security systems but also through transparency in banking processes.

Pikkarainen et al. (2018) also highlighted issues such as lack of internet infrastructure and slow adoption of technology, particularly in rural areas. In regions with poor internet connectivity, customers face challenges in accessing and using online banking services.

Kumar & Shankar (2019) identified the main types of cyber threats that internet banking faces, including phishing attacks, malware, and identity theft. Phishing attacks are the most common, where fraudsters impersonate banks to steal customer credentials.

Rahi & Ghani (2019) studied customer behaviour in internet banking, emphasizing the role of trust in ensuring continued usage. Their study identified that customers who trust the bank's security mechanisms are more suitable to use internet banking services regularly. Additionally, perceived ease of use also plays a pivotal role.

### **Statement of the Problem**

In financial sector, internet banking has emerged as a critical component in delivering efficient and secure banking services. IDFC First Bank has invested significantly in its internet banking infrastructure to meet customer expectations and enhance service delivery. Despite this there

is an increasing concern regarding the security of net banking services and their impact on the usage of customers

The primary problem addressed in this study is to investigate the extent to which internet banking services provided by IDFC First Bank are perceived as secure by customers and how this perception affects their usage patterns. Specifically, the study aims to:

1. **Assess Customer Perceptions of Security:** Understand the level of trust and perceived security associated with IDFC First Bank's internet banking services.
2. **Analyse Usage Patterns:** Examine how perceptions of security influence customer usage and engagement with internet banking services.
3. **Identify Security Challenges:** Identify and evaluate the challenges and issues related to the security of net banking that may affect the degree of customer usage and satisfaction.
4. **Determine Improvement Areas:** Provide recommendations for enhancing the security features of internet banking services to better meet customer needs and improve overall satisfaction.

### **Scope of the Study**

The scope of this study encompasses the following dimensions:

1. **Customer Perception and Security:** The study will explore customer perceptions regarding the security of net banking services provided by IDFC First Bank. This includes the evaluation of customers perception and their desire to use net banking facilities.
2. **Usage Analysis:** The research will examine the relationship between security perceptions and actual usage patterns of internet banking services. It will assess how concerns about security affect frequency, types of transactions, and overall engagement with the bank's online services.
3. **Security Challenges:** The study will identify common security challenges and issues faced by customers using internet banking services. This includes analysing reported security incidents, user complaints, and any known vulnerabilities that might impact user confidence and behaviour.
4. **Comparative Analysis:** While the primary focus is on IDFC First Bank, the study may include a comparative analysis with other banks' internet banking services to provide context and identify best practices or areas for improvement.
5. **Geographical and Demographic Considerations:** The study will consider various customer segments, including different geographical locations and demographic profiles, to understand if security concerns vary across these groups and how they impact usage patterns.

### **Objectives of the Study**

- To analyse the impact of net banking services provided by IDFC First Bank for customer satisfaction.
- To assess how these services influence societal banking habits and financial inclusion.
- To identify the challenges faced by customers and the bank in the realm of internet banking.

### **Research Methodology**

Study is based on both primary and secondary data-

### **Primary Data:**

#### **Surveys/Questionnaires:**

- A structured questionnaire was developed and distributed to IDFC First Bank net banking customers. The questionnaire included sections on customer demographics, security perceptions, usage patterns, and experiences with security-related issues.
- **Interviews:** In-depth interviews with selected customers and bank staff were conducted to gain qualitative insights into security concerns and user experiences. Interviews will be semi-structured, allowing for detailed responses and follow-up questions.

### **Secondary Data:**

- **Bank Reports and Records:** Analysis of IDFC First Bank's internal reports on net banking security incidents the usage statistics and feedback of customers.
- **Literature Review:** Review of existing research, industry reports and case studies related to internet banking security and customer usage patterns.

### **Tools of Data collection**

- **Questionnaires:** To measure perceptions and attitudes, a well-structured questionnaire with Likert scale was used.
- **Interview Guides:** Semi-structured interview guides while allowing for flexibility in responses.
- **Software:** Statistical software (SPSS or R) and (NVivo) is used for thematic analysis.

### **Data Analysis**

The data which are collected from different sources are analysed by using percentage method. Tables, Charts, Graphs, Pie charts and different diagrams are used for analysis and interpretations.

### **Limitations of the Study**

- The findings of the study may be influenced by sampling bias if the sample is not representative of the entire customer base of IDFC First Bank.
- Some respondents may provide answers which are socially desirable or downplay their security concerns.
- Access to internal bank data and detailed security incident records may be restricted, which could limit the comprehensiveness of the analysis regarding security challenges and incidents.
- The study relies on self-reported data from surveys and interviews, which may be subject to inaccuracies or subjective interpretations of security and usage experiences.
- The study's sample size, while aimed to be representative, may still limit the depth of insights, particularly if subgroups within the sample are small.

### **Future Outlook of Idfc First Bank**

IDFC First Bank is likely to continue focusing on expanding its retail banking segment, which has been a key driver of its growth. The bank aims to increase its customer base by offering innovative products such as savings accounts with higher interest rates, personal loans, home loans, and credit cards. Expanding its presence in underpenetrated markets, particularly in semi-urban and rural areas, will also be a focus.

Digital banking will remain a cornerstone of the bank's strategy. By leveraging AI, machine learning (ML), and block chain, IDFC First Bank plans to enhance its digital platforms, improve customer experience, and streamline operations. Collaborations with fintech companies to offer seamless, innovative financial services will be a priority to attract younger, tech-savvy customers.

The bank intends to strengthen its Small and Medium Enterprises (SME) banking offerings, recognizing the significant potential in this segment. By providing tailored financial products, digital tools, and advisory services, IDFC First Bank aims to become a preferred banking partner for SMEs, which are a critical component of India's economy. To sustain growth, the bank will focus on improving its asset quality by adopting robust risk management practices. This includes better credit appraisal processes, reducing non-performing assets (NPAs), and diversifying its loan portfolio to mitigate risks associated with sectoral concentration.

While the bank has a strong digital presence, it will also continue to expand its physical branch network strategically, especially in regions where banking penetration is low. This hybrid approach of combining physical branches with digital services will help the bank cater to a broader customer base.

IDFC First Bank is likely to incorporate sustainability into its lending practices by promoting green financing and supporting projects that have a positive environmental impact. This could include financing renewable energy projects, energy-efficient technologies, and sustainable infrastructure. The bank is expected to integrate ESG criteria into its business operations, investment decisions, and risk management processes. By aligning with global ESG standards, IDFC First Bank aims to attract socially conscious investors and contribute to long-term sustainable development. The bank will continue to invest in CSR initiatives that focus on education, healthcare, and community development. It is likely to expand its CSR programs to include more impactful projects that address pressing social issues such as poverty alleviation, financial literacy, and women's empowerment. IDFC First Bank is expected to adopt green banking practices, such as reducing its carbon footprint through energy-efficient operations, promoting digital banking to reduce paper usage, and implementing waste management practices in its branches and offices. The bank will likely engage its employees in sustainability initiatives, encouraging them to contribute to environmental and social causes. This could include volunteer programs, sustainability training, and incentives for adopting eco-friendly practices. As part of its growth strategy, the bank may introduce sustainable investment products, such as green bonds or socially responsible investment funds, allowing customers to invest in projects that align with their values.

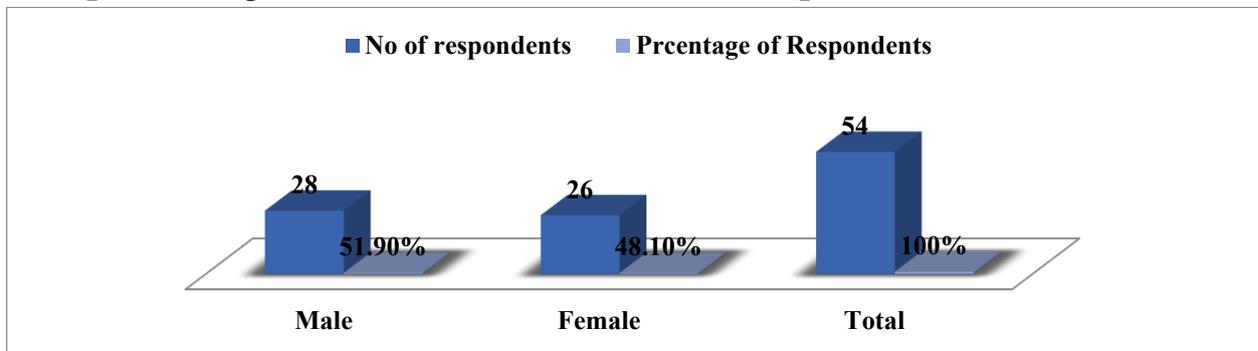
IDFC First Bank may seek partnerships with organizations, NGOs, and government bodies to promote sustainability and drive impactful social and environmental initiatives. These collaborations can enhance the bank's efforts in addressing global challenges such as climate change and social inequality.

### Data Analysis

1 (a) Table showing the number of Male and Female respondents:

Gender	No. of Respondents	% of Respondents
Male	28	51.9%
Female	26	48.1%
Total	54	100%

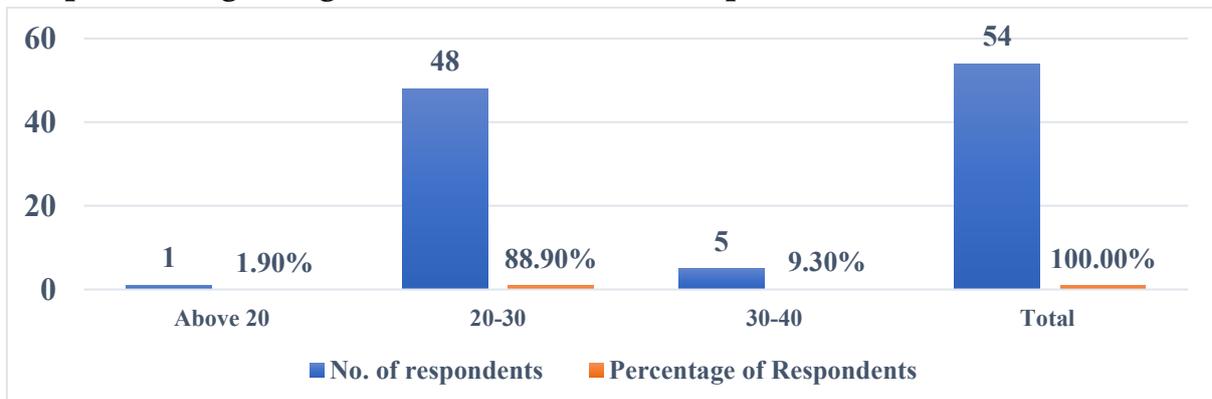
(b) Graph showing the number of Male and Female respondents



2 (a) Table showing the age wise classification of respondents:

Age	No. of Response	Percentage of respondents
Below 20	01	1.9%
20-30	48	88.9%
30-40	05	9.3%
Total	54	100%

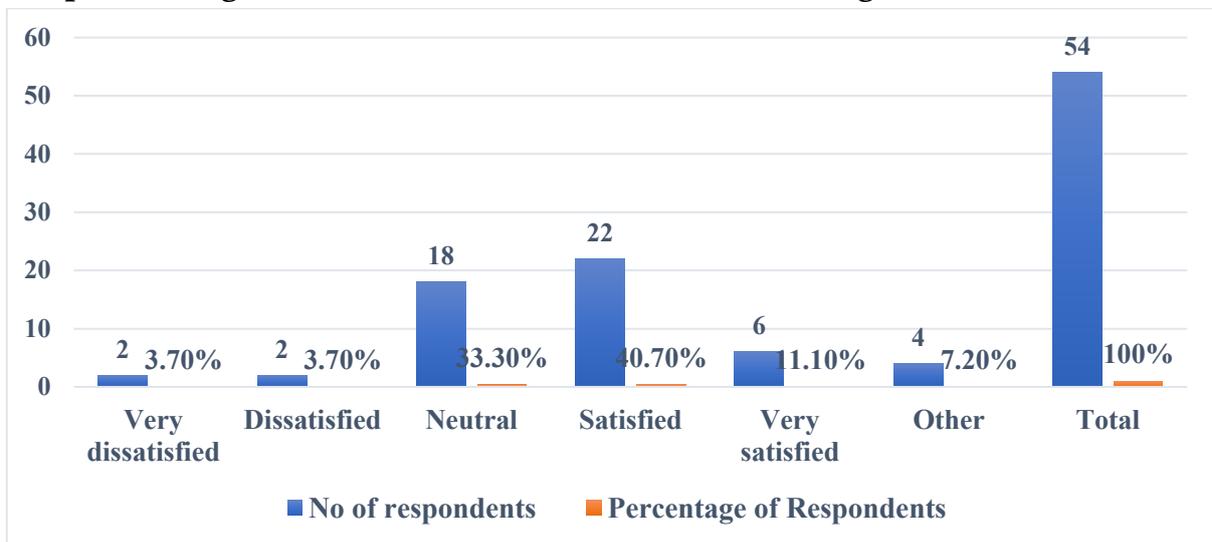
(b) Graph showing the age wise classification of respondents:



3 (a) Table showing customers satisfaction towards using e-banking services

Customers satisfaction towards e-banking services	No of Respondents	Percentage of Respondents
Very dissatisfied	02	3.7%
Dissatisfied	02	3.7%
Neutral	18	33.3%
Satisfied	22	40.7%
Very satisfied	06	11.1%
Others	04	7.2%
Total	54	100%

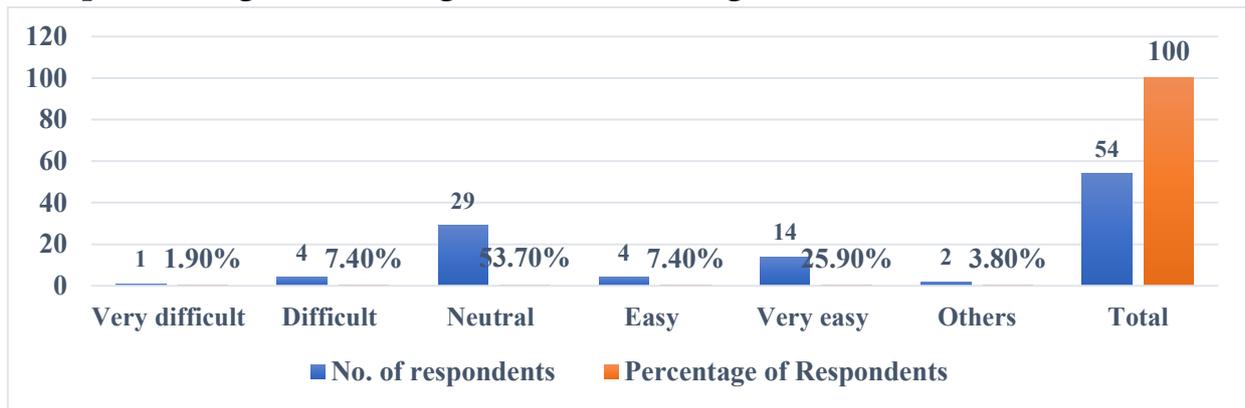
(b) Graph showing customers satisfaction towards e-banking services



4 (a) Table showing ease of navigation on E-banking program.

Ease of navigation on E-banking program	No. of Respondents	Percentage of respondents
Very difficult	01	1.9%
Difficult	04	7.4%
Neutral	29	53.7%
Easy	04	7.4%
Very easy	14	25.9%
Others	02	3.8%
Total	54	100

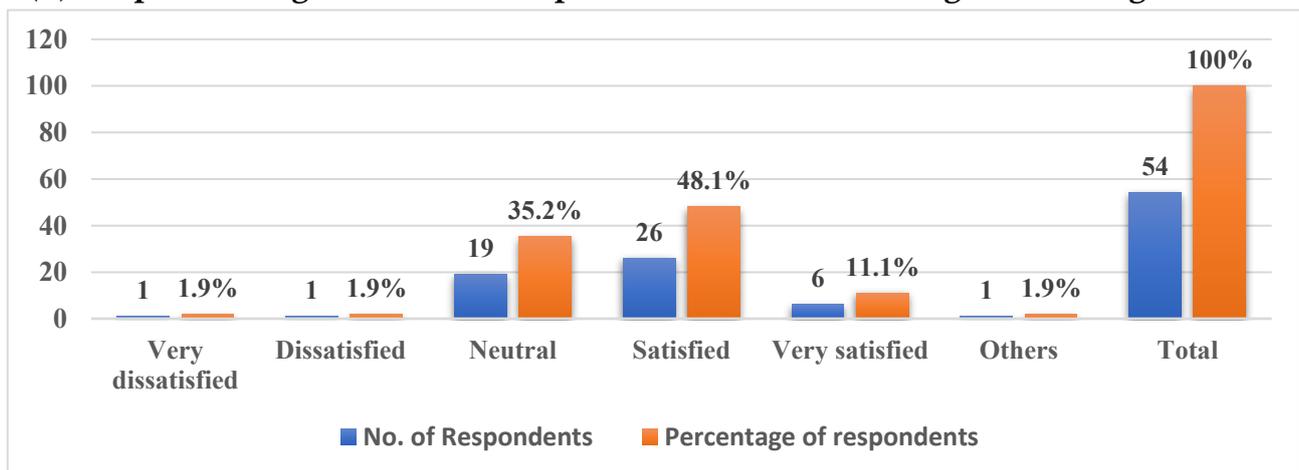
(b) Graph showing ease of navigation of e- banking services.



5 (a) Table showing satisfaction of speed of transaction through E-banking services.

Satisfaction of speed of transaction through E-banking services	No. of Respondents	Percentage of Respondents
Very dissatisfied	01	1.9%
Dissatisfied	01	1.9%
Neutral	19	35.2%
Satisfied	26	48.1%
Very satisfied	6	11.1%
Others	01	1.9%
Total	54	100

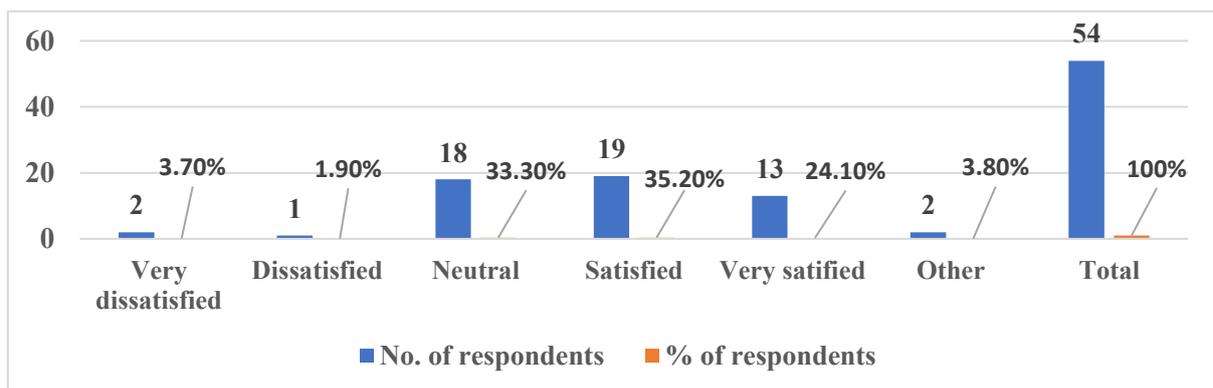
(b) Graph showing satisfaction of speed of transaction through E-banking services.



6 (a) Table showing satisfaction level of security measure provided by e-banking services.

Satisfaction level of security measure provided by e-banking services.	No. of respondents	Percentage of respondents
Very dissatisfied	2	3.7%
Dissatisfied	01	1.9%
Neutral	18	33.3%
Satisfied	19	35.2%
Very satisfied	13	24.1%
Other	02	3.8%
Total	54	100%

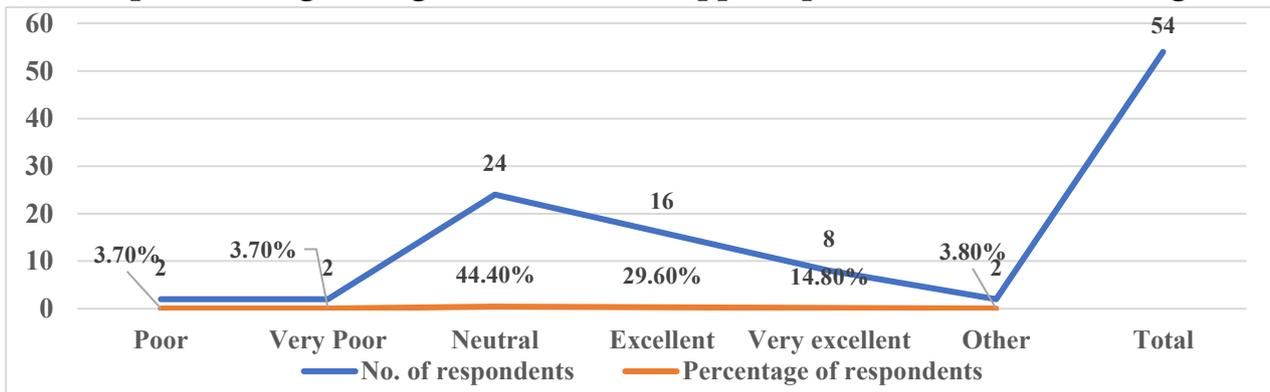
(b) Graph showing satisfaction level of security measure provided by e-banking services.



7 (a) Table showing rating of customer support provided in e- banking issues.

Rating of customer support provided in e- banking issues.	No. of respondents	Percentage of respondents
Poor	02	3.7%
Very poor	02	3.7%
Neutral	24	44.4%
Excellent	16	29.6%
Very excellent	08	14.8%
Other	02	3.8%
Total	54	100

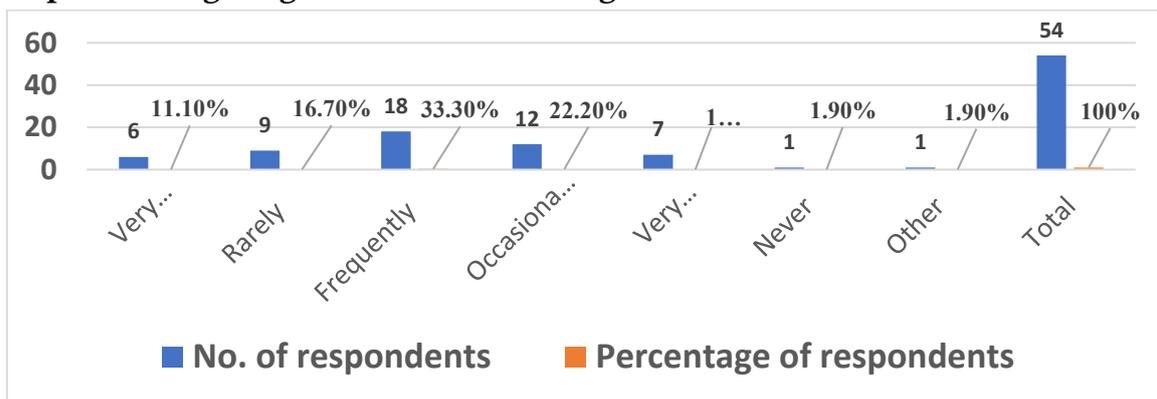
(b) Graph showing rating of customer support provided in e- banking issues.



8 (a) Table showing usage of internet banking.

Usage of internet banking	No. of Respondents	Percentage of respondents
Very frequently	06	11.1%
Rarely	09	16.7%
Frequently	18	33.3%
Occasionally	12	22.2%
Very satisfied	07	13%
Never	01	1.9%
Other	01	1.9%
Total	54	100%

(b) Graph showing usage of internet banking.

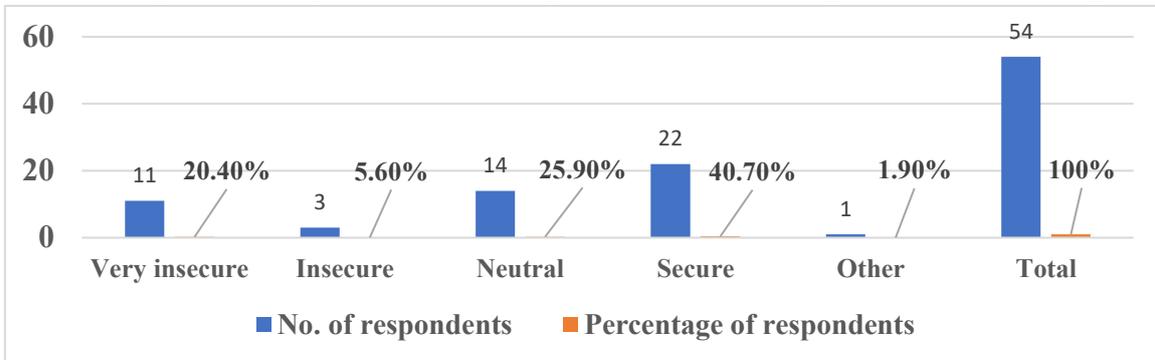


9 (a) Table showing how secure you feel while using net banking?

How secure do you feel while using internet banking	No. of respondents	Percentage of respondents
Very insecure	11	20.4%
Insecure	3	5.6%
Neutral	14	25.9%

<b>Secure</b>	<b>22</b>	<b>40.7%</b>
<b>Other</b>	<b>01</b>	<b>1.9%</b>
<b>Total</b>	<b>54</b>	<b>100%</b>

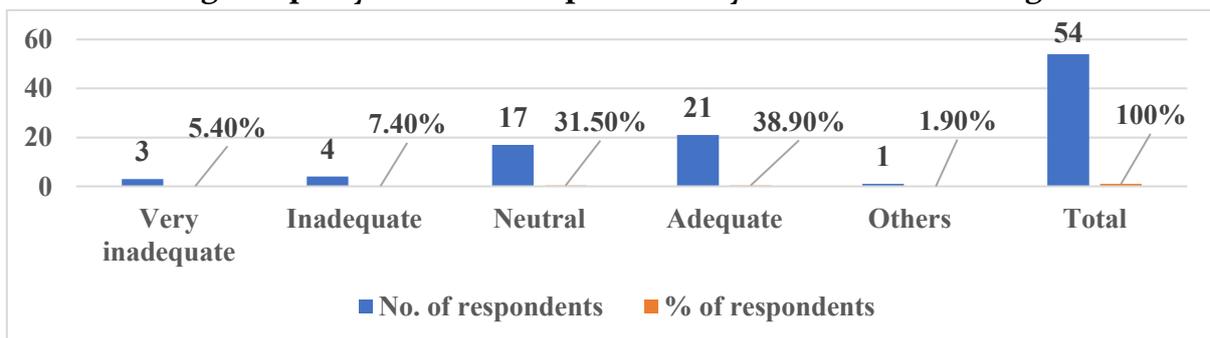
(b) Graph showing how secure do you feel while using internet banking?



10 (a) Table showing adequacy of resources provided by bank for e-banking issues

Adequacy of resources provided by bank for e-banking issues	No. of respondents	Percentage of respondents
Very inadequate	03	5.6%
Inadequate	04	7.4%
Neutral	17	31.5%
Adequate	21	38.9%
Others	01	1.9%
Total	54	100%

(b) Table showing adequacy of resources provided by bank for e-banking issues

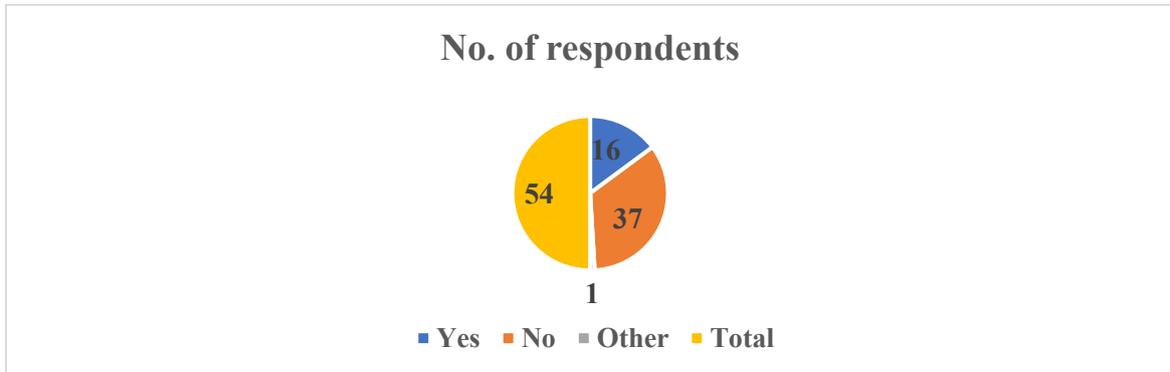


11 (a) Table showing customer opinion on fraudulent issues in internet banking?

customer opinion on fraudulent issues in internet banking	No. of respondents	Percentage of respondents
Yes	16	29.6%
No	37	68.5%

Other	01	1.9%
Total	54	100%

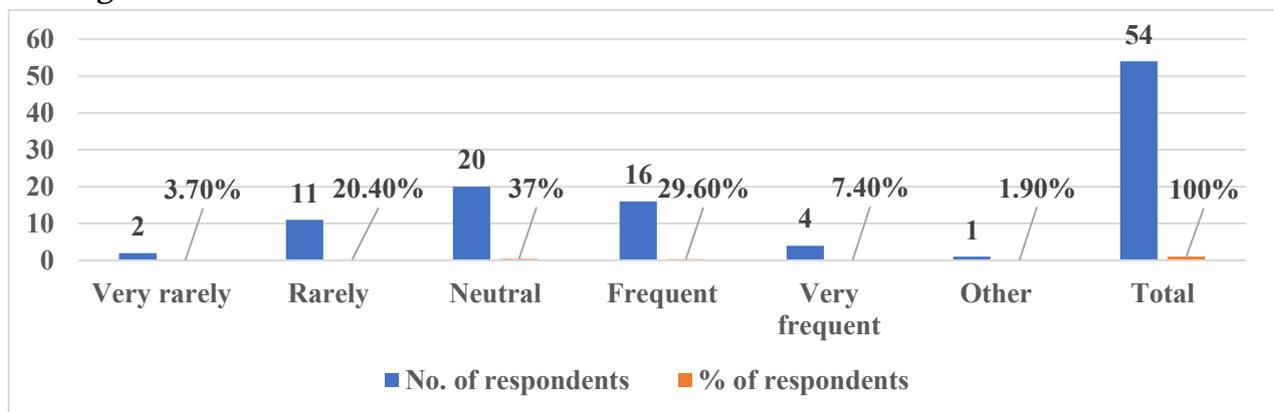
13 (b) Table showing customer opinion on fraudulent issues in internet banking?



12 (a) Table showing as frequently receiving changes or update notification to internet banking services?

Frequency of Notification update about e-banking services	No of Respondents	Percentage of respondents
Very rarely	2	3.7%
Rarely	11	20.4%
Neutral	20	37%
Frequent	16	29.6%
Very frequent	04	7.4%
other	1	1.9%
Total	54	100%

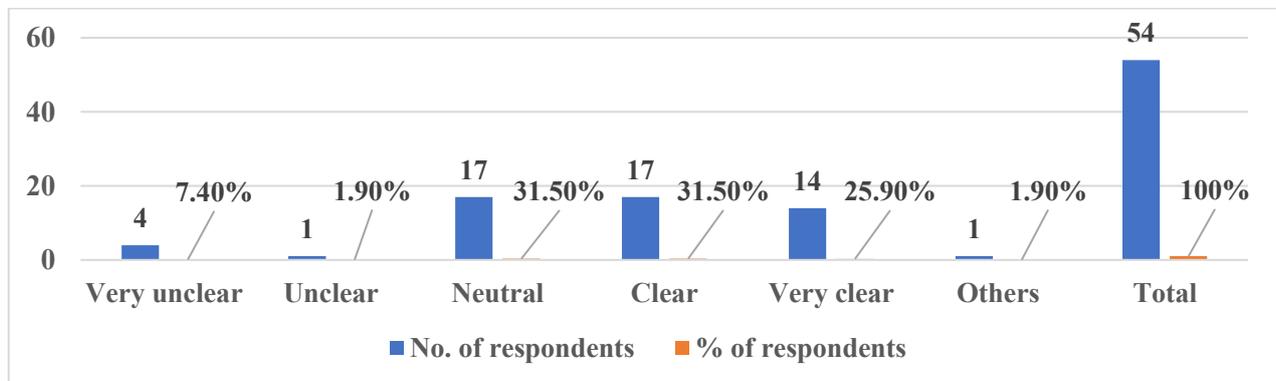
(b) Graph showing as frequently receiving changes or update notification to internet banking services?



13(a) Table showing clear instructions and information provided by e-banking services.

Clear instructions and information.	No. of respondents	Percentage of respondents
Very unclear	04	7.4%
Unclear	01	1.9%
Neutral	17	31.5%
Clear	17	31.5%
Very clear	14	25.9%
Other	01	1.9%
Total	54	100%

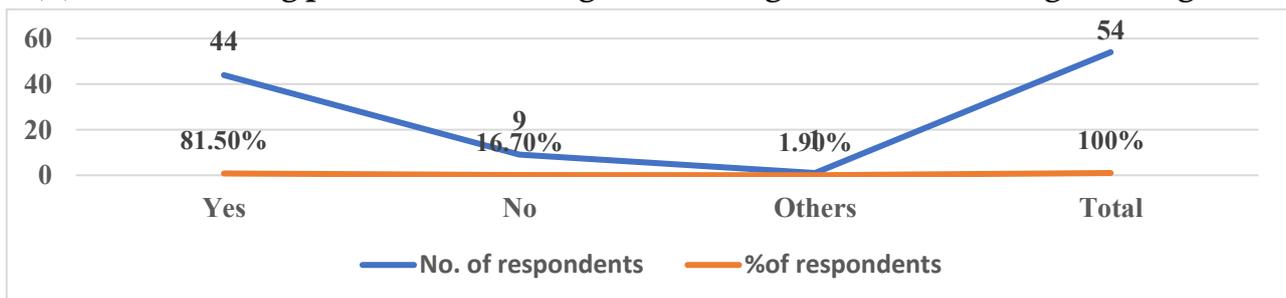
15 (b) Graph showing clear instructions and information provided by e-banking services.



14 (a) Table showing preference of using e-banking instead of visiting banking.

Preference of using e-banking instead of visit banking.	No. of respondents	Percentage of respondents
Yes	44	81.5%
No	09	16.7%
Others	01	1.9%
Total	54	100%

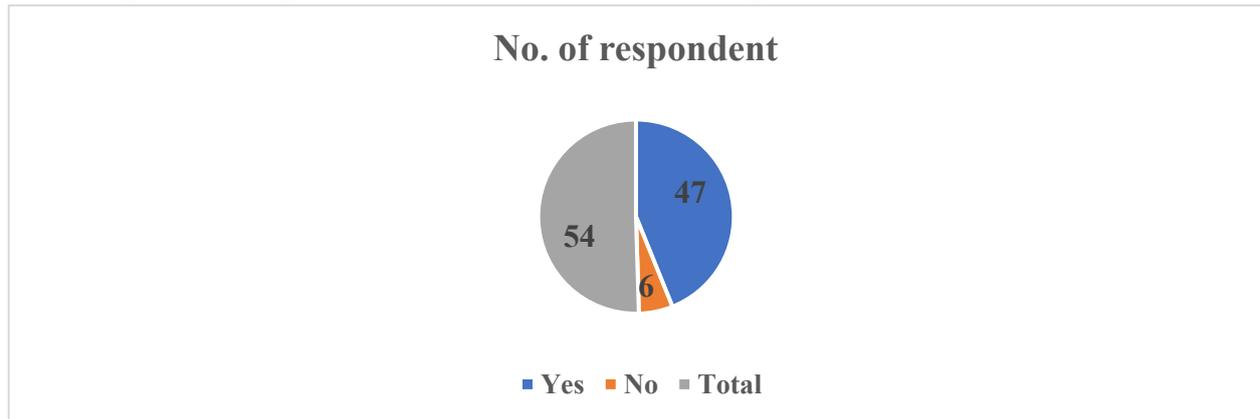
16 (b) Table showing preference of using e-banking instead of visiting banking.



15 (a) Table showing recommendation of e-banking services

recommendation of e-banking services	No. of respondents	Percentage of respondents
Yes	47	87%
No	06	11.1%
Total	54	100%

17 (b) Graph showing recommendation of e-banking services.



### Descriptive Analysis

The survey on e-banking services provides insightful data into various aspects of customer experiences, ranging from demographic trends to user satisfaction levels. This shows that both genders are equally engaged with e-banking services, reflecting its broad appeal and accessibility.

When it comes to age demographics, the majority of respondents (88.9%) are within the 20-30 age bracket. This is consistent with expectations as younger users tend to be more tech-savvy and are more inclined to use online banking platforms.

The degree of satisfaction with e-banking services appears generally positive. A significant portion of respondents (40.7%) expressed satisfaction, while an additional 11.1% were very satisfied, bringing the total satisfaction rate to over 50%. On the other hand, about 7.4% of users reported dissatisfaction, indicating room for improvement. Notably, 33.3% of users remained neutral, which could indicate either ambivalence or a lack of distinctive experiences that stand out, positive or negative.

Ease of navigation, a critical factor in user experience, yielded a more varied response. While 25.9% of respondents found navigating e-banking platforms very easy, the majority (53.7%) were neutral, neither finding it easy nor difficult. This neutrality could imply that while users manage to navigate the platforms, the experience does not particularly impress them, indicating an area where banks could enhance user interfaces to make the experience more intuitive and seamless.

Transaction speed, another crucial element of e-banking, received generally favourable feedback. Almost half of the respondents (48.1%) were satisfied with the speed, and an

additional 11.1% were very satisfied. However, a substantial portion of users (35.2%) remained neutral, suggesting that while the speed is generally acceptable, it may not always meet the higher expectations of more frequent users.

Security is paramount in e-banking, and the majority of respondents appear to trust the systems in place. 35.2% of users were satisfied with the security measures, while a notable 24.1% were very satisfied.

29.6% of respondents rated customer support as excellent, and 14.8% considered it very excellent, showing that banks are doing well in serving a portion of their customers effectively. Yet, the neutral response indicates an opportunity for improving the consistency of support services.

The data also shows that e-banking is frequently used by a significant portion of respondents. Around 33.3% use e-banking services frequently, and 11.1% use them very frequently. This reflects a growing reliance on digital financial transactions, though there is still a segment of users (16.7%) who use these services rarely, pointing to either barriers in accessibility or preference for traditional banking methods.

In terms of security, while 40.7% of respondents feel secure using e-banking services, a concerning 20.4% feel very insecure. This reveals that despite the positive security ratings from many users, there remains a significant group that lacks confidence in the security measures currently in place. This highlights an urgent need for banks to focus on building and communicating more robust security protocols to alleviate such concerns.

Finally, when considering users' opinions on whether banks provide adequate resources for resolving e-banking issues, most respondents (38.9%) feel the resources are sufficient. However, 31.5% are neutral, suggesting that while the services are adequate for many, they might not fully address the needs of a sizable group of users. Additionally, 13% find the resources either inadequate or very inadequate, pointing to areas where further support or more comprehensive problem-solving tools could be introduced.

## **Findings**

The data analyzed and interpreted enumerated and presented below:

### **a. Profile of respondent**

- (48.1%) are female and (51.9%) are male. There is a majority (51.9%) of male.
- (1.9%) are under the age below 20, (88.9%) are under the age group 20-30, (9.3%) are under the age group 30-40, From the above analysis it can be seen that maximum percentage of respondents are belongs to the age group 20-30 years.
- (1.9%) are high school students, (35.2%) are undergraduate students, (61.1%) are post graduate student, (3.8%) are working professionals. Majority (61.1%) of respondent's are post graduate.
- (14.8%) are earning below 15000, (42.6%) are earning 15000-30000, (14.8%) 30000-45000, (18.5%) are earning above 45000 and (9.3%) are not earning. From the analysis it is clear that majority (42.6%) of respondents' average of total income is 15000-30000.

### **b. Perception**

- From the analysis it was seen that majority (40.7%) are satisfied quality of e-banking services in IDFC bank
- From the above analysis it was seen that majority (53.7%) are neutral for the ease of navigation on e-banking services in IDFC bank.
- On analysis it is observed that majority (48.1%) are quite satisfied for the speed of transactions of e-banking services in IDFC bank.
- On analysis it was noted that majority (35.2%) are satisfied with the security measures provided by e-banking services in IDFC bank.
- On analysis it was seen that majority (44.4%) respondents are on neutral point on the customer support provided by e-banking services provided in IDFC bank.
- It was seen that majority (33.3%) respondents are frequently using the access of e-banking services in IDFC bank.
- It was seen that majority (40.7%) respondents are feeling secure for using e-banking for their financial and personal cause in IDFC bank.
- It was seen that majority (38.9%) of respondents are adequate about the online resources and FAQs provided by bank for troubleshooting e-banking issues in IDFC bank.
- It was seen that majority (68.5%) of respondents have not faced fraudulent issues while using e-banking services in IDFC bank
- It was seen that majority (37%) have respondents as neutral for the updates or notification for the e-banking services in IDFC bank.
- It was seen that majority (31.5%) are clear and (31.5%) are neutral have respondent for the clear and understandable information are provided while using these e-banking services in IDFC bank.
- It was seen that majority (81.5%) respondents feel better to use e-banking services than visiting banks on often based.
- It was seen that majority (87%) respondents have recommended for e-banking services to others.

### **Conclusion**

While the profile of respondents is well-documented, deeper analysis can help to understand how gender, age, or education level correlates with perceptions of the e-banking services. For instance, cross-tabulate the gender or age group with the satisfaction level on various e-banking features (navigation, security, etc.) to determine if different demographics have unique needs or perceptions.

Security measures received a decent satisfaction rating (35.2%), but since security is paramount in banking, it's worth exploring if this can be improved further. Questions related to the types of security features respondents want could be useful

Although 68.5% of respondents have not faced fraudulent issues, the remaining 31.5% is a significant number. A deeper examination of what fraudulent issues they might have encountered, if any, could help IDFC Bank fortify its e-banking security.

The fact that 31.5% of respondents are neutral about the clarity of information provided means there is room for improvement in making information clearer and more digestible for customers. IDFC Bank could benefit from simplifying jargon and improving communication about e-banking features and updates.

The neutral response to customer support (44.4%) may indicate a need for better accessibility or response times. IDFC Bank might improve by offering 24/7 support, live chat features, or an FAQ section that directly addresses common concerns. This could further boost user satisfaction and reduce neutral responses. 37% of respondents were neutral on receiving updates or notifications. IDFC Bank might look into enhancing its communication channels for new features, services, or even security alerts, ensuring customers feel well-informed.

While no one reported challenges, this might mean the questionnaire was insufficient in probing for minor inconveniences or less-obvious pain points. Conducting in-depth interviews or adding more nuanced questions may reveal subtle challenges that weren't initially identified.

Since 81.5% prefer e-banking over physical banking, the bank could ask users for more suggestions on additional features they'd like to see, such as expanded mobile functionalities or integration with third-party apps.

The neutral response to customer support (44.4%) may indicate a need for better accessibility or response times. IDFC Bank might improve by offering 24/7 support, live chat features, or an FAQ section that directly addresses common concerns.

Since a large percentage of respondents recommend the service (87%). IDFC Bank might look into enhancing its communication channels for new features, services, or even security alerts, ensuring customers feel well-informed. IDFC Bank could benefit from simplifying jargon and improving communication about e-banking features and updates.

## Reference

1. Adjei, A., & Mensah, I. (2020) Cyber security threats and prevention techniques in internet banking. *Journal of Cyber security*, 7(4), 223-235.
2. P.Bikoji & Dr. Rambabu Gopiseti ( 2022) Challenges and opportunities of e-banking services in India - a select study, *IJRAR* Nov. 2022, Volume 9, Issue 4,
3. Dangwal.. R.C., K. S. (January 2010). *The upcoming Technology and the associated innovations*. sfo, ca: The ICFAI University Press.
4. Alalwan, A. A., et al. (2018) Factors influencing the adoption of internet banking: An empirical study in Jordan. *International Journal of Bank Marketing*, 36(6), 1129-1146.
5. Bada, A., et al. (2019) Cyber security in banking: A review of current practices and challenges. *Journal of Financial Crime*, 26(3), 679-694.
6. Chauhan, A., & Ghosh, P. (2022) Regulatory frameworks and compliance in digital banking. *Financial Technology*, 19(1), 56-70.

7. Gupta, P., et al. (2019) Adoption of internet banking in emerging markets: An empirical analysis. *International Journal of Economics and Financial Issues*, 9(2), 67-73.
8. Hernandez, C., et al. (2019) Factors affecting the adoption of internet banking in the digital age. *Journal of Financial Services Marketing*, 24(2), 49-61.
9. Lichtenstein, S., & Williamson, K. (2006) Internet banking and customer trust: An empirical investigation. *International Journal of Bank Marketing*, 24(6), 329-348.
10. Mishra, S., & Sharma, V. (2020) Cost-benefit analysis of cyber security in internet banking. *Journal of Cyber security Research*, 15(1), 45-58.
11. Pikkarainen, T., et al. (2004) Consumer acceptance of online banking: An extension of the technology acceptance model. *Internet Research*, 14(3), 224-235.
12. Sharma, A., et al. (2021) Biometric authentication in banking: Current trends and future prospects. *International Journal of Financial Innovation*, 6(2), 34-48.
13. Sweeney, M., et al. (2016) Cyber threats in internet banking: A review of emerging attack vectors. *Computers & Security*, 62(3), 89-104.
14. Tapscott, D., & Tapscott, A. (2017) *Block chain revolution: How the technology behind bitcoin is changing money, business, and the world*. Penguin.
15. Vishwanath, A., & Sweeney, M. (2019) Consumer perception and adoption of multi-factor authentication in online banking. *Journal of Information Security*, 29(4), 77-91.
16. Wang, J., et al. (2012) Security concerns and the adoption of internet banking in China. *Journal of Financial Services Marketing*, 17(3), 257-270.
17. Zhang, K., et al. (2020) Artificial intelligence in banking cyber security. *Journal of Financial Technology*, 9(1), 13-29.
18. Choudhury, P. (2020) The Impact of Internet Banking on Customer Satisfaction in India." *International Journal of Banking and Financial Technology*, 6(2), 34-45.
19. Singh, A., & Malhotra, N. (2019). "Security Challenges in Online Banking: An Indian Perspective." *Journal of Banking and Finance Technology*, 12(3), 78-92.
20. Mehta, P., & Gupta, R. (2021). "Customer Perceptions of Online Security in Internet Banking: A Case Study of IDFC First Bank." *Journal of Digital Banking*, 5(1), 14-28.