Monetizing Data Points to Increase Profitability for Banks

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Abstract

Today's digital world is functioning with a new asset – data. Businesses possess humongous volumes of data, opening up new revenue streams. The financial world has also started to recognize the potential of data. Payment providers can turn internal and external data into a revenue earner to create alternative business models. These models will be different for primary owners and custodians of data.

This paper focuses on how banks can increase their profitability by leveraging and monetizing data. It studies the evolution of data monetization by different payment providers.

Traditional banks used to charge fees for rendering services. This paper explores how banks can monetize data in several ways to generate new revenue opportunities for product cross-selling or reach out to new customer segments. It analyses customer preferences across different payment platforms. The paper also discusses 'open banking' and other pain points and strategies to tackle them.

1. Introduction

With the increasing threat from new digital players in the payments field, banks need to shift from their traditional 'float and fee income' business models to data monetization models, leveraging internal and ex-

ternal data. At present, such models are more centered towards customer data points and evaluate a customer's behavior to provide customized and personalized products for which customers are even willing to pay a premium. [1] As per International Data Corporation (IDC) reports, as of 2019, almost 40% of the IT projects deliver services that monetize data. [2][3].

For the banking industry, the implementation of the data monetization models will vary depending on its segment. It may be a retail client, corporate entity, treasury operations, or other banking services, including Para banking. [4] However, all such models should lead to increased profitability for banks, whether individually or in convergence.

Banks are in a better position than digital payment services providers to monetize data by insight selling or performance tracking, or both. The payment provider business model has evolved amidst different regulations and technological advancements to thrive on data and leverage it.

Today, some banks share their data with third parties, who, based on insights derived through analytics, help them generate value. However, it is imperative now that banks leverage this data to increase profit across various customer touchpoints, allowing banks to tap customers at the bottom of the value chain who cannot generate value out of their data.

Banks have the edge over other players. It possesses internal data from normal business and may access or acquire supplemental data from external sources like social media, adding value to applying different analytical algorithms. The combination of large volumes of data at a bank's disposal and different analytical models will help in better asset and risk management for its customers and at the same time perform better liquidity and minimum reserves maintenance for banks. The true value proposition for data monetization can only be achieved if it generates dividends for customers and banks alike.

One more aspect worth exploring for banks is synergizing with telecom operators, digital firms, and marketers to merge their customer data with bank's data and gain an end to end view of the data value chain, [5] which will help in enhanced customer profiling for banks and enable them to deliver tailored loyalty programs or product cross selling, to increase profit and retain valuable customers. Simultaneously,

such initiatives will enable banks to strategize additional investment or business development by having better control over the end-to-end value chain.

1.1. Objective of the Paper

This paper focuses on how banks can increase their profitability by leveraging and monetizing such data. It studies the evolution of data monetization by different payment providers to understand the scope for banks.

While traditional banks provide various alternatives to complete transactions and earn their revenue by charging fees for rendering such services, this paper explores how banks can monetize data in several ways to generate new revenue opportunities for product cross-selling or reach out to new customer segments. For this purpose, it analyses customer preferences across different payment platforms through a survey. The paper also discusses 'open banking' and other pain points and strategies to tackle them.

2. Literature Review

2.1. Data Monetization as a Concept and Opportunity for Banks

The concept of data monetization refers to leveraging data to create value. In banks, data creates value for banks, their customers, and value chain partners. According to Todd Winship, the Global Product Director of Business Intelligence and Analytics at Temenos, "the increased system connectivity and the digital universe doubling its data every two years, has led to the prevalence of data-driven organizations that are acting as lifestyle platforms to generate value for its entire ecosystem. Financial institutions generate a quarter of the world's data alone and enjoy the highest consumer trust levels. Therefore, they are best positioned to become the pioneering platforms of the future to create new models of monetizing internal and external data." [6] "Banking is considered one of the most data-rich businesses globally, with estimates that the average financial and securities organizations are managing more than 3.8 petabytes of data."[7]

Many examples suggest that data can be monetized to extract value out of it; for example, Google generates huge revenues from advertisements solely driven by data insights. Many big data analytics firms are coming up in the market. [2] Financial institutions are also not behind, with more than 40% of global financial institutions investing in data insights with a primary focus on internal use. [8]

2.2. Open-Banking: Opportunities and Challenges

The open banking model enables data sharing through Application Programming Interfaces (APIs) to deliver increased marketplace capabilities. APIs in banking has been used in sharing information rather than transferring monetary balances. Open banking holds a new set of benefits, such as improved customer experience and new revenue streams. [9] Open banking with APIs brings in new revenue streams in license and usage fees. It provides opportunities to build new innovative products. The key API revenue opportunities come from customer data, payment transactions, account information, loan, credit-related activities, etc. The API revenue model comes with direct and indirect revenue sources. Service fees, API call fees, licensing fees, insights and data fees, and support fees fall under direct source. Revenue sharing comes under indirect sources. [10]

Banks also need to be aware of the potential loss of existing revenue due to these new payment revenue streams opening up. [9] The point of concern with open banking and APIs development is the security and data privacy risk it brings along. A highly regulated sector has to cope with these challenges and learn to accommodate such developments in its ecosystem as evolutionary rather than disruptive. There are high speculations concerning open banking and the regulatory changes accompanying it in the banking sector, which also impact the speed of its adoption among major banks around the world. [11]

2.3. Big Data and Analytics: The Ever-Changing Dynamics for Banks

According to some studies, 60% of North American financial institutions believe that big data analytics offers a significant competitive advantage, and 90% think that successful big data initiatives will define the winners in the future. [12] Banks have huge amounts of data, but their inability to implement big data projects using analytics to gain insights has been one of the major reasons for banks struggling to generate revenue in the global landscape of fast-evolving technologies. Lack of skilled people in data analytics, storage of bank data in silos leading to poor accessibility, and the time is taken to extract value out of large data sets are key reasons for less than optimal big data implementations in banks. [12]

These challenging dynamics for banks are important because any big data implementation will have

four key aspects: (i) Infrastructure, (ii) Data Storage, (iii) Data Processing and Management, and (iv) Data Analysis. A successful collaboration of all four aspects is the key to the success of the overall project. Customer insights, market analytics, explosive data growth, regulations, increasing fraud, and security concerns are key drivers for adopting big data as a technology in the financial industry. [7]

2.4. Digitization of Financial Services

The growth of Fintech startups and digitization of financial services has been rising, with customers shifting their focus towards low-cost and free financial services. This rise in FinTech has also brought in challenges for regulators and market participants alike to maintain a balance between the benefits of innovation and the potential risks of these approaches. [13] The accompanied growth of RegTech and SupTech, and FinTech has added new dimensions to the financial industry. All these have led to the adoption of end-to-end digitization of services across all banking segments.

Digitization has led to a shift towards a profit center-based approach, aiming for efficient working capital management, keeping in hindsight the long-term goal of an integrated, lean, innovative, and efficient management system, considering the example of corporate treasury functions. Banks who can understand these opportunities and changes at the earliest, and embrace them, will be better equipped to cater to their clients in the longer run. [14]

2.5. Central Banks as a Regulatory Authority

The banking sector requires intervention from the central bank and regulatory authorities worldwide to protect customers and maintain transparency. Regarding the Indian landscape, the Reserve Bank of India (RBI) regulates and monitors all banking activities. With evolving technology and digitization of financial services, RBI has played a pivotal role in ensuring compliance, both from banks and customers' points of view, which is evident from RBI laying down the rules for issuance of licenses and working of payment banks [15], regulation of FinTech [16], working of commercial banks [17] and guidelines on Para banking services being provided by banks [4]. These guidelines and regulations have put a check on banking activities being carried out by commercial banks. They have at the same time ensuring that data privacy and security

concerns of customers and organizations are resolved to maintain trust in the banking infrastructure.

2.6. Monetizing Data across Different Banking Segments

Banks are aware of their customers' earnings, expenses, and purchases - information that would not be accessible elsewhere. They can tap into this data to map the customer persona and understand their behavior. This mapping can be done for retail and corporate customers.

One example of encashing on both line-of-business and supplemental data from corporate accounts is Bank of America's (BoA) utilization of customer behavior data from the website. One-on-one customer service call transcripts to figure out the reasons behind customer churn. [7] Analysis of these data points showed that BoA's offering was too rigid for their corporate customers, prompting them to move towards new payment services. BoA dropped this offering to launch a more flexible version.

American Express (AmEx), a multinational financial services corporation, holds both customer and merchant data. With the information of individual accounts - 90 million cards and 5 billion transactions per year, AmEx leveraged on cardholder spending information and matched the merchants to the retail customers. They are likely to spend more and stay loyal. [18] AmEx also holds data on each customer's lifestyle – data points on the stores they visit and their purchases - with which they can provide tailor-made offers and products at the right time. They utilized historical transactions and identified 24% of Australian accounts vulnerable to closing, leading them to promote targeted marketing measures to retain them.

Under the market value cost model, banks benefit by selling, renting, bartering, or trading the data. Barclays [6] set out to get this benefit by selling their line-of-business customer data, including location and transaction/spending information, to third-party organizations. According to the bank, the customer location details can be leveraged for fraud detection and prevention purposes, which is completely optional. The information being sold is purely numerical and anonymized and is not aimed towards selling/marketing ads.

An innovative way of monetizing data is to reap the business benefits of the data that banks hold, which means that banks can utilize the value created in paral-

lel business processes, to provide seamless service and performance. JP Morgan Chase [6] was able to break down their consumers into smaller segments and generate reports within seconds, which was possible when they combined their expanse of credit card and transactional data along with US Government economic statistics. They were able to develop insights into consumer trends and narrow down their customer segments into unique ones to target their services accordingly.

A Fujitsu European study revealed that one-third of banking customers expect to buy non-banking services from their financial service providers. [6] Considering the quantum and nature of data that banks hold, they can go beyond providing financial services and function as advisors, access facilitators, and/or value aggregators to both retail customers and enterprise accounts.

Banks would be able to make the most of customer data by adopting any cost valuation models. One such way is to tap into the economic value of their data and act as an advisor. They have a full view of customer data - starting with preferences and buying patterns, up to know a customer's life-stage events such as planning a wedding or buying a car. [6] Banks can, in the long run, use both these kinds of data points. They would be aware of when these life-stage events are likely to happen and can provide an average cost of these events, taking into account their transactional history, along with the third party offers to reduce this cost. With this, the bank can gain a fee from the third parties and strengthen the customer relationship.

Banks serving retail and corporate clients with customer-centric products are assisted by an important bank segment, the treasury. Treasury performs multiple critical roles like cash and liquidity management, risk management, liaising with regulatory authorities, managing liquid investments in government securities, back-office operations, etc., [14] apart from performing all these functions, the treasury department of the bank can operate from a Money Market desk, Foreign Exchange (FX) desk, Capital Markets or Equities desk or an Asset and Liability Management (ALM) desk, to coordinate all the functions with the help of the back office team. These teams have all the data (both internal and external) at their disposal, which can benefit both the bank and clients alike.

Banks must understand how next-generation data will help streamline treasury functions and increase profitability for banks.

Regulatory requirements make it mandatory to report clients and trades booked and then reissued or canceled on the client's request. Such contracts may be booked either from FX Desk or Money Market desk, or Equities desk. The back-office team of treasury operations has to manage the reporting of such trades promptly and has all relevant data about such clients. In such a scenario, the back-office team can analyze this data based on certain forecasting algorithms in coordination with respective contract booking desks to predict how likely certain clients are to initiate a cancel and reissue request. In such cases, banks can charge a higher margin from them, which makes the client less likely to ask for such requests in the future and, on the other hand, generates a higher margin for banks and reduces compliance workload in terms of reporting such trades.

Similar regulatory requirements also mandate banks to report a change in traders from different desks concerning the contracts. For example, a trader or employee from branch X of the bank books a contract from the FX desk on the relationship manager's (RM) request. The employee then leaves the bank or shifts to another branch, say Y, in another geographical location. As per compliance requirements, all such trades booked by the trader before moving need to be reported. This data is again collected and verified by the back-office team, and hence they have all such previous data. This data should help the treasury to target and analyze such employee behavior. It will be possible to predict which branch employees have a higher probability of such actions and accordingly direct RMs to go for other branches with less probability, as all such transactions will be on a digital platform and not physical, which will result in less compliance reporting and more successful contracts being initiated.

The cash and liquidity management of banks is closely linked with risk or disaster management. With the help of the data at its disposal, treasury can track liquidity, the market risk concerning changing market prices, credit risk concerning defaults, the operational risk concerning frauds and thus increase banks' profitability. For example, back offices with data insights can predict when the bank can default on certain payments. Accordingly, they can hedge that risk better. Based on forecasting tools, banks can predict their clients and counterparties as to how likely they will default on payments. During which period of the year, the rate of defaults will be higher. Such contracts

involving those clients or counterparties can earn a higher margin for the bank.

Another such scenario where forecasting will help is to predict when banks will have an excess of funds, either in securities or currencies, which can be traded by the banks in the market for profit, which is only possible by proper analysis of the data received from customer behavior, both retail and corporate, and using that to generate different predictive models.

Reputational risk is very important for traditional banks in terms of gaining customers' trust. Data can again play a key role in mitigating such risk. A Treasury department with data insights can help monitor the minimum capital reserves requirement norms set up by the central bank and maintain a minimum portfolio in highly liquid government securities, which reduces the chances of default in fulfilling government norms and enhances the chances of maintaining an intangible asset in the form of reputation. Such data insights are also useful for disaster management – e.g., pandemics – to better monitor changes introduced by the central bank and act accordingly. Such swift actions can help banks aim at financial inclusion by targeting clients at the bottom of the value chain, which is also encouraged by central banks in such disasters.

Traditional banks have huge reservoirs of data. With streamlined data insights and better forecasting models, banks can also engage in different 'Para banking' activities like mutual fund schemes, pension schemes, PSU bonds, and venture capital funds with its excess capital. Banks can expand their traditional business by extending the value chain to other industries like Insurance and accessing facilitators. They can offer insurance products at the right time, to the right customer, and at the right cost, based on the customer persona's analytical insights - age, family, assets, and financial condition of the customer.

2.7. Evolution of Payment Services Providers: Role of Data

The payments industry's evolution revolves around data, growth in demand, and regulations governing data protection. It can be considered to be a part of the overall FinTech evolution. The growth of FinTech can also be attributed to the evolution of digital technology and the ever-increasing need for data. FinTech [19], in simple terms, can be defined as associating any technology with financial services and providing a solution or platform to customers.

The period from 1886 to 1967 saw the evolution of technology to deliver financial services. The landmarks were: first undersea trans-Atlantic telegraph cable in 1866, Fedwire in 1918, electronic fund transfers using telegraph and Morse code, and credit cards to reduce the burden of carrying cash around. Post-1967, the banking industry saw a shift from analog systems towards digital services with the first ATM by Barclays Bank, the emergence of online banking, digital exchanges, and SWIFT guidelines. The landscape again changed drastically post the 2008 global economic depression, in terms of the use of payment services, with people shifting to mobile platforms and other third-party players entering the fray.

This evolution shows that the end-users ease in availing services was a key driver, and data played a big role in it. The success of different financial platforms depended on how they harnessed value out of the data using technology. The study of the evolution of payment banks and Fintech is crucial for traditional banks in the Indian context because the basic need for these services arose due to the distrust that customers had in the traditional system. The so-called 'financial inclusion' could not be implemented to the fullest due to less penetration by the traditional banking system than countries in Europe or the USA.

On this background, it becomes more imperative for traditional banks to try and bridge this gap by developing different business models using data insights.

There is a need to understand the growth of payment services directive (PSD) guidelines as well. [20] The PSD1 directives (came into effect from 25th December 2007) were aimed at payment services providers (PSPs) only across the European Union (EU) to regulate payments. However, the PSD2 guidelines (from 13th January 2016), which came into effect to broaden the scope of PSD1, brought in new PSPs, which were called third-party payment providers, completely changing the landscape. These third-party providers brought in new challenges for traditional banks, with the scope of PSD2 reaching beyond the EU. The enhanced scope was an objective of PSD2, primarily driven by increased customer needs, greater data at the disposal of institutions to provide better services, and the enhanced customer protection amidst such enhanced services.

These changes necessitated the development of Application Program Interfaces (APIs) and banks of such platforms in collaboration with third-party vendors to

provide customer-centric products and services. The success of such initiatives for banks and their customers depends essentially on how efficiently data is used and how profitable monetization of such a data-driven business model is.

2.8. Banks: The Edge over Payment Providers

The primary objective of starting payment banks in India by RBI was to encourage better financial inclusion. [15] However, traditional banks still hold an edge in providing better customer-oriented services, right up to the bottom of the pyramid, while rejuvenating the traditional business model with digital transformation.

Traditional banks have a long-standing relationship of trust and loyalty with their customers, which will help them address customer's data privacy and data ownership concerns better. Payment banks cannot issue credit cards or provide loan services, which is a major handicap. Traditional banks, though, can monetize the huge data captured from these services to understand customer buying patterns and funding requirements to provide customized offers to increase their profitability.

Traditional banking also has an edge due to the wide scope of today's banking (including 'Para banking') compared to the fragmented services by payments banks. Conventional banks can tie up with third-party vendors and provide bundled offers to their customers on purchasing goods or services from these parties, using the bank's payment platforms.

This existing edge will become more dominant, with banks investing huge capital on digital transformation to improve the experience across different customer touchpoints. With a wider range of services and better-streamlined processes from data insights, traditional banks can aim for better financial inclusion with faster on-boarding, customized interest rates, and charge waiver on value-added services. By monetizing data, conventional banks can become a one-stop solution for customer purchases, investment, wealth and retirement planning, brokerage, and advisory services, which is impossible for other payment providers.

2.9. Pain Points for Banks Monetizing Data

The biggest challenge that data brings with it is the customer's concerns on data privacy and ownership, which becomes even more challenging with different sets of regulations/guidelines for owners and custo-dians of data; and deciding for which data one is an owner and one is a custodian.

Both traditional banks and payment banks have to deal with privacy concerns. Developments concerning General Data Protection Regulation (GDPR) in Europe and Personal Data Protection Bill (PDPB) in India are moving towards more stringent guidelines related to data sharing and usage, which coupled with the updated Payment Services Directive (PSD2) guidelines, makes sharing of banking data with third parties easier through Application Program Interface (APIs). However, as a fall out of these developments, 'open banking' is picking up. Open banking has resulted in access to consumer banking and transactional data to third party financial service providers, which has become possible with the infrastructural development concerning APIs, which has brought newer challenges before traditional banks, which has left traditional banks with the dilemma – whether to invest in fraud management and enhanced cybersecurity systems or to develop their API infrastructure and go for an end-to-end digital transformation so that the customers going for third party vendors can use the bank's touchpoints, which in turn, will lead to revenue generation.

Another noteworthy issue is that, though PSD2 guidelines give customers the right to allow third-party vendors to access certain bank data through APIs, [9] this also brings up the possibility of a loss of reputation for banks due to any data breaches, as they are the ultimate guardians of this data. Reputational risk management in this regard will lead to additional capital investments for the banks to better safeguard their data, which otherwise could have been used for other digital initiatives.

Neo-Banking's growth also poses a significant threat to traditional banks when it comes to harnessing value out of data. Neo-Banks are digital-only banks that do not have any physical branches and provide all their services online. Though the guidelines for such banks are country-specific and current regulations allow 'Neo Banks' to function only in collaboration with established banks in India, the onus lies completely with traditional banks regarding how they can use this partnership for their profitability.

3. Research Methodology

This paper is formulated based on both primary and secondary data collected from various sources. Secondary research helped understand the generic

banking functions and potential for data monetization across them, the evolution of payment service providers, and how traditional banks hold an edge over them in data monetization and pain points for banks to monetize their data. Based on these points, our primary research sought to analyze the following –

1. What banking method is preferred and why?
2. What is the preferred payment mode for varying transaction amounts?
3. Are people ready to adopt mobile payment services provided by their bank?
4. Is there a definitive incentive for banks to monetize their data and generate profit?

Primary research was conducted via a questionnaire across the Indian subcontinent, targeting individuals 18 years and above.

The survey collected 205 responses, with 132 male respondents and the remaining female. The occupation and age diversity of these men and women is presented in Figures 1 and 2 below.

4. Analysis and Results

It can be seen that 195 respondents do, as opposed to those who do not, use internet banking. These 195 respondents are spread across all age groups and in all lines of work – self-employed respondents, those employed in both the public and private sector, and those currently unemployed/studying. It can be seen based
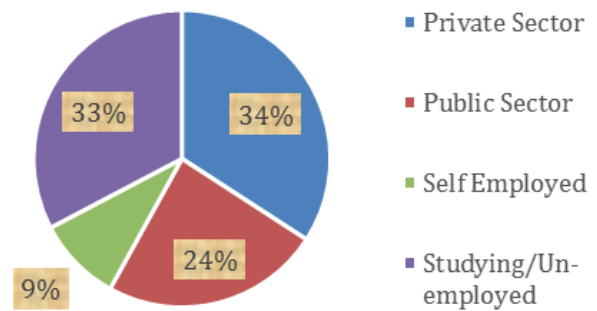
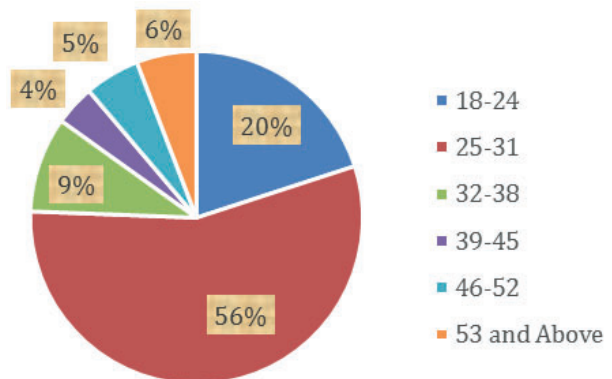

Figure 1: Occupation Diversity In Data Set

Figure 2: Age Group Diversity In Data Set

on the survey that internet banking is highly prevalent across all professions and age groups. Considering the age group of 25-31 years alone, many of this age group have already adopted internet banking. It should be the primary target of banks to monetize the data col-
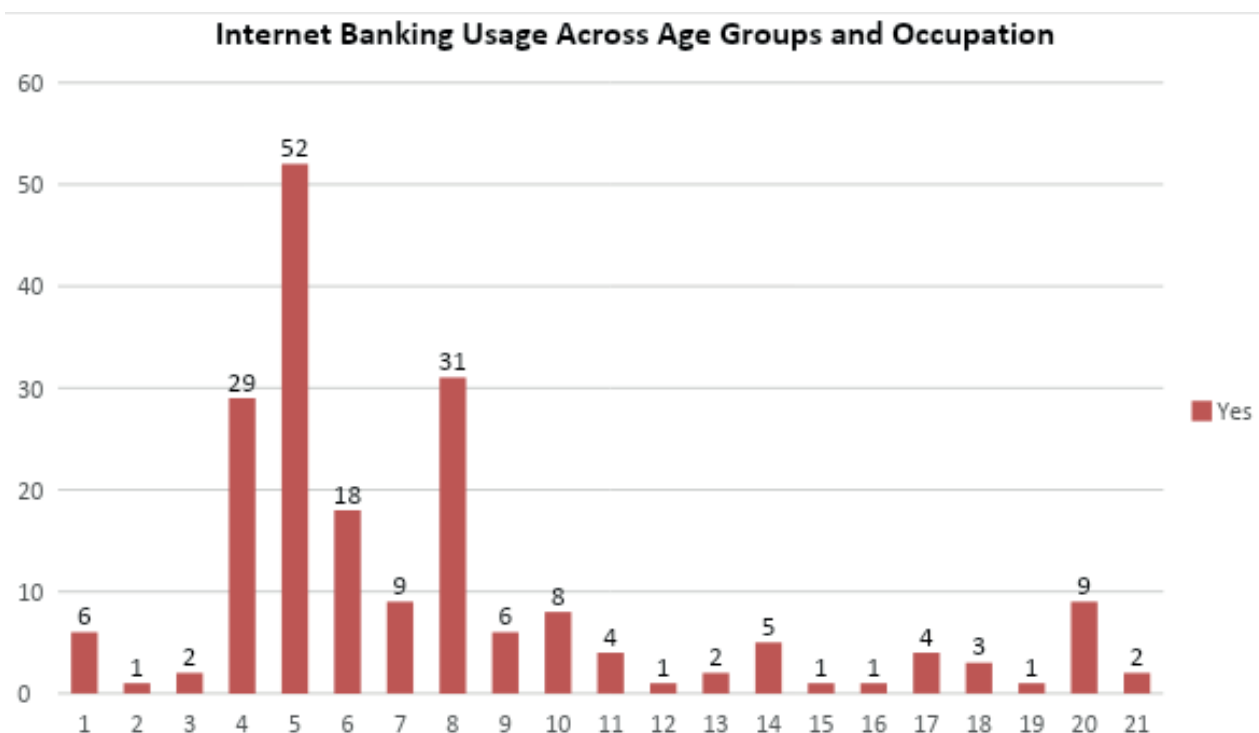

Figure 3: Adoption of Online Banking across Occupations and Different Age Groups

lected and generate profit. Figure 3 shows usage of the internet by age groups.

Respondents were questioned on what mode of banking they preferred with the options stated below. They were asked to rate these on a scale of 1-4, with 1 being most preferred and 4 being least preferred.

i. Banking in person;
ii. Telephone banking;
iii. Online banking (via browser); and
iv. Mobile banking (via apps).

A descriptive analysis of Table 1 revealed that respondents most prefer both mobile banking and online banking via browser. Of the total respondents, 103 individuals view online banking via apps as their first preference, followed by 77 individuals who prefer online banking via browser. From the descriptive statistics table given below, it is seen that mobile banking (via apps) and online banking (via browser), the mod-

el is 1 and 2 respectively, implying that most of the respondents prefer these two methods. It is observed that a lower mean of 1.97 and 2.10 of ratings for Online banking via browser and Mobile Banking via apps, respectively, mean that customers prefer these more.

A correlation of 0.533 between mobile banking and online banking is highlighted in Table 2, meaning these methods are positively correlated. A negative correlation between online banking modes and physical banking reflects that the latter might turn out to be a pain point for bankers in the widespread adoption of digital services.

Suppose we dig deeper into the reasons behind respondents preferring mobile and online banking. In that case, it is revealed that the correlation between the factors (Table 4) like the convenience and easy to maintain transactions is high with a value of 0.706. Descriptive Statistics Analysis of Reasons for Preference

Table 1

Descriptive Analysis of Banking Preferences

Descriptive Statistics Analysis				
	Banking in Person	Telephone Banking	Online Banking(via browser)	Mobile Banking(via apps)
Mean	2.612745098	3.142156863	1.975490196	2.107843137
Standard Error	0.080507011	0.07466682	0.068950098	0.088127906
Median	3	4	2	1
Mode	4	4	2	1
Standard Deviation	1.149870121	1.066455505	0.984804377	1.258718269
Sample Variance	1.322201294	1.137327345	0.96983966	1.58437168
Kurtosis	-1.390807903	-0.565603463	-0.283334594	-1.450463082
Skewness	-0.20067274	-0.902553455	0.830686467	0.513105328
Confidence Level(95.0%)	0.158737192	0.147221977	0.135950207	0.173763454

Table 2

Correlation between Different Banking Preferences

Correlation between Banking references				
	[Banking in person]	*[Telephone Banking]*	*[Online Banking (via browser)]*	*[Mobile Banking (via apps)]*
[Banking in person]	1			
[Telephone Banking]	0.300336847	1		
[Online Banking (via browser)]	-0.191494252	-0.510715457	1	
[Mobile Banking (via apps)]	-0.517622085	-0.429742277	0.533780132	1

Table 3

Descriptive Statistics Analysis of Reasons for Preference of Online Modes

Descriptive Statistics Analysis				
	Convenience	Low Service Charge	Safe & Secure	Easy to maintain transactions
Mean	1.799019608	2.705882353	2.5	2.200980392
Standard Error	0.086347004	0.080198389	0.074686634	0.084366693
Median	1	3	3	2
Mode	1	4	3	1
Standard Deviation	1.233281904	1.145462114	1.066738503	1.204997402
Sample Variance	1.520984256	1.312083454	1.137931034	1.452018739
Kurtosis	-0.66892947	-1.368724212	-1.231610775	-1.35713437
Skewness	1.073637738	-0.25750026	-0.024590089	0.459539002
Confidence Level(95.0%)	0.170252016	0.158128676	0.147261044	0.166347399

Table 4
Correlation table – Reason behind preferring online banking

Correlation between Reasons for Online Banking Preference				
	[Convenience]	[Low Service Charge]	[Safe & Secure]	[Easy to maintain transactions]
[Convenience]	1			
[Low Service Charge]	0.253234266	1		
[Safe & Secure]	0.358510554	0.519237088	1	
[Easy to maintain transactions]	0.706600507	0.417468013	0.462208866	1

of Online Modes is presented in Table 3. Respondents prefer convenience, i.e., no waiting time at the banks and no hustle traveling for banking activities. Low service charges for banking activities are on a lower priority when it comes to banking methods. Respondents were asked to rate 4 factors: Convenience, Low Service Charge, Safe & Secure, and Ease to Maintain Transactions on a scale of 1-4 (1 being most preferred and 4 being least preferred) in order to determine the reasons behind the popularity of online banking modes. Descriptive statistics analysis and correlation calculation between the factors is given in table 3 and 4, respectively. Lower ratings for Convenience and Easy to maintain transactions reveal that they are on a higher priority level than Low Service Charges and Safety & Security when customers go for online modes of financial transactions.

Considering the payments function alone, we split the payments in terms of value – up to Rs. 20,000 for daily transactions and above Rs. 20,000, for a better understanding of the customer mindset, while choosing a payment method and to analyze what payment method would be preferred among the following options (with multiple option selection enabled)–

• Cash
• DD/Check
• Swiping credit/debit cards at retail outlets
• Online transactions using credit/debit cards
• Electronic bank transfer (RTGS/NEFT/IMPS)
• Mobile payment (Paytm/Google Pay/PhonePe/etc.)
• Banking platforms (SBI YONO, HDFC Payzapp, etc.)

For amounts up to Rs. 20,000, almost 82% of the respondents opted for mobile payment platforms via apps as their first payment mode, followed by around 57% of respondents opting for both credit/debit cards swiped in brick and mortar stores and online transactions (Figure 4), whereas, for transactions above Rs. 20,000, only around 34 % of respondents perceive mobile banking platforms for payment. In contrast, most respondents, around 71% of them prefer bank transfers via NEFT/RTGS/IMPS. Around 51% opt for

online transactions using debit/credit cards, which indicates that the data's monetization is also related to the customer's quantum of transaction. Each payment mode has a different potential associated with generating the data to be monetized. Banks have to understand this opportunity to tap and use the customer transaction data to develop customer insights.

The questionnaire also collected data about whether people would be open to using their banker's mobile payment platforms. The results revealed that 84% of the respondents are willing to shift to their banker's payment platform. Payment Preferences for Transactions of Higher Value is presented in Figure 5, which indicated that individuals have more trust in their bank; they believe that their banker can offer more security compared to third-party providers, and many of them are not comfortable in sharing their data with third parties. Figure 6 gives a split of such reasons for individuals preferring their banks more than third party providers if banks can come up with their payment platforms.

From the primary research conducted and data gathered from secondary research, customers are willing to use online and mobile banking due to its convenience. Paying the service charge for transactions does not play an influential role in selecting a payment method, which can be a turning point for banks urging customers to increase their online and mobile banking usage by making it more secure and gaining their trust, which also makes it evident that customers are willing to pay more for convenience and tailored financial services. Along with this, banks can also begin the shift towards strengthening their API infrastructure, making their mobile banking platforms more user-friendly, and incentivize the customer on its use, thereby opening up a new avenue for the customer to utilize such services.

From the survey undertaken, it is clear that customers trust their bank more than other providers. With customers willing to use their own banker's services and the bank is a repository of customer-specific
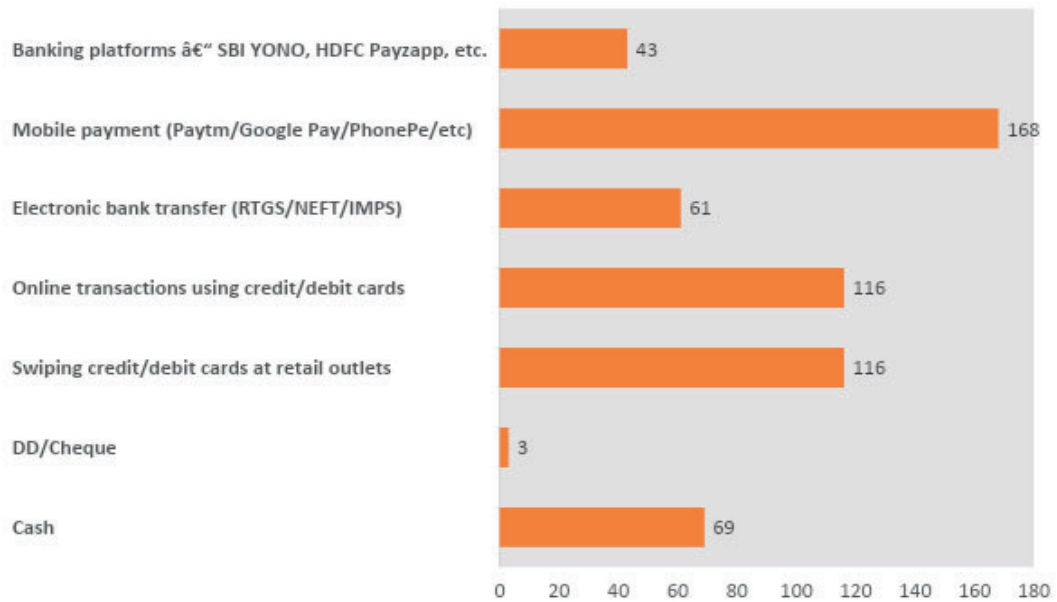
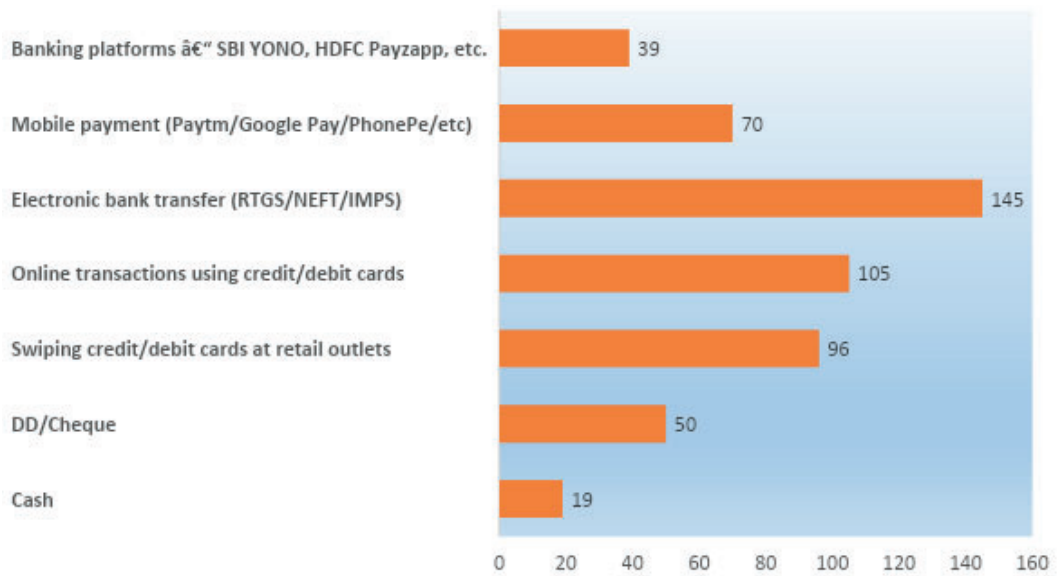Figure 4: Payment Preferences for Everyday Transactions

Figure 5: Payment Preferences for Transactions of Higher Value

Reasons for Customers Preferring their own Banker with Payment Platforms

- I trust my own bank more
- My bank has better security
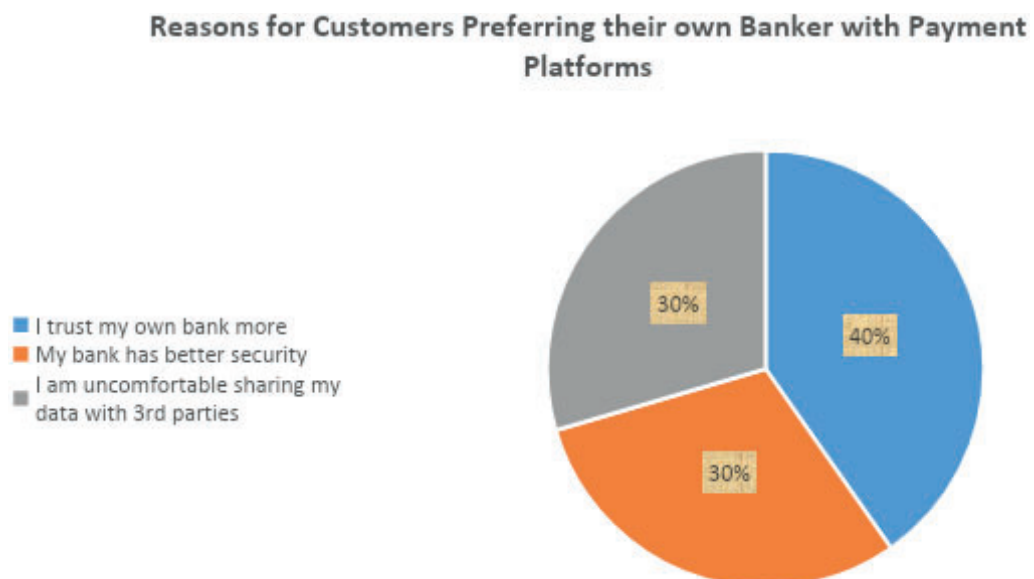- I am uncomfortable sharing my data with 3rd parties

Figure 6: Weightage of Reasons behind Preferring own banker

data, banks are better suited to use the data at their disposal and leverage this to monetize data for profitability.

4.1. Managerial Implications:

Though there has been a shift towards people using third-party payment service providers due to ease of data sharing through APIs with such service providers, customers still trust their banker in terms of security and are willing to shift to payment platforms provided by their banks. Banks have to make their systems more secure and, at the same time, better incentivize their customers to use these services. Customers using such platforms will mean more data for banks and the opportunity to use this data to generate insights for better profitability.

This opportunity for banks also comes with an inherent challenge related to the customer mindset as around 34% of the people from our primary research still prefer cash as a payment mode for daily transactions, which means that customers are still inclined towards cash as a payment mode for certain transactions, and this might pose a threat for an end-to-end penetration of mobile payment platforms. Banks have to be proactive in keeping track of their customer base, the occupation, and age diversity within it, so that tailored financial product delivery is possible, as adoption of digitization is occupation and age-specific. Therefore, data monetization should weigh in the different aspects like customer inclination, age, occupation, etc., for optimum profitability.

5. Conclusion:

Advancements in technology have been an enabler for cross-industry functionalities and the rise of new business models to leverage the new form of treasure data. However, the bigger challenge is the limited perception the industry players have on how to monetize the data at hand. Digital payment providers are already in the race for leveraging customer data. Banks have to brace themselves so as not to be left behind in the race. Banks have a huge repository of data and are better positioned in the industry to monetize the data they possess.

Working to enhance customer experience, banks can monetize data in various ways and develop new revenue streams. They hold niche data of customers that are not accessible or available to any other data-driven organization, thus putting them in a better data monetization position. A few banks worldwide, including Barclays and JP Morgan, have already invested in data-driven capabilities' and are benefitting from their newly created revenue streams. However, banks are not at liberty to implement any new model without addressing concerns around utilizing customer data.

A critical issue is about addressing customer privacy concerns revolving around using their data points. Regulators have investigated this dimension and introduced relevant directives such as GDPR in Europe and PDPB in India. These directives have called upon banks to utilize customer data without jeopardizing customers' interests and considering their approval before data utilization.

Traditional banks hold the edge over digital payment providers for data monetization. They have built a relationship with customers based on trust and loyalty: customers trust their bank more. They are more willing to avail services provided by their banker as compared to third parties. Banks can leverage this edge and take a step forward, instead of just being 'banking partners,' to explore new/alternative revenue streams and increase profitability.

References:

1. P. Gera, A. Secchi, and L. Gagliardi, "Maximizing Revenue Growth in Retail Banking the Next Chapter in Our Banking As a Living Business Series," 2018.

2. D. Levi and L. Solomou, "Bank Data-Untapped High Return Asset or a Junk Bond?" 2018.

3. L. Peacock, "IDC's 2017 CIO predictions: IT will monetize data, CIOs will recognize traditional IT limits," 2016.

4. RBI, "Master Circular – Para-banking Activities," 2015.

5. B. Alessio, N. Digiacomo, and K. Mole, "Monetizing data: A new source of value in payments," 2017.

6. T. Winship, D. Mistry, and D. Colceriu, "Banking Data Monetization," 2016.

7. H. Forest, F. Evelyn, D. Rose, and D. Berenzon, "Big Data: How it can become a differentiator." 2014.

8. "Beyond Digital. How can Banks Meet Customer Demands?" 2017.

9. L. Brodsky and L. Oakes, "Data sharing and open banking," 2017.

10. V. Durghados, "REVENUE OPPORTUNITIES CREATED BY OPEN APIs," 2018.

11. S. Mansfield-Devine, "Open banking: opportunity and danger," Comput. Fraud Secur., vol. 2016, no. 10, 2016.

12. J. Coumaros et al., "Big Data Alchemy : How can Banks Maximize the Value of their Customer Data ? Banks Have Not Fully Exploited the Potential of Customer Data," 2014.

13. D. W. Arner, J. N. Barberis, and R. P. Buckley, "The Evolution of Fintech: A New Post-Crisis Paradigm?," Univ. New South Wales Law Res. Ser., no. January 2016.

14. M. Cox, G. Bellows, J. Lopez, C, N. Toole, D. Gangne, and P. Garcia, "Digital transformation in treasury services," 2019.

15. RBI, "Guidelines for Licensing of 'Payments Banks,'" 2014.

16. RBI, "Report of the Working Group on FinTech and Digital Banking," 2017.

17. RBI, "Operations and Performance of Commercial Banks," 2017.

18. C. Manglani, "American Express : Using data analytics to redefine traditional banking," 2017. [Online]. Available: https://digital.hbs.edu/platform-digit/submission/american-express-using-data-analytics-to-redefine-traditional-banking/#.

19. J. Kagan, "Financial Technology – Fintech," Investopedia, 2019. [Online]. Available: https://www.investopedia.com/terms/f/fintech.asp.

20. "PAYMENT SERVICES DIRECTIVE 2 AND OPEN BANKING," 2019.