# A Comprehensive Analysis of Financial Performance: Insights from a Leading Banks

## **BACHELOR OF SCIENCE IN MATHEMATICS**

## **SUBMITTED BY**

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**CATEGORY:** 

**Data analytics with Tableau** 

PROJECT TITLE :

A Comprehensive Analysis of Financial Performance: Insights from a Leading Banks

**INTRODUCTION:** 

Overview: A brief description about your project.

Purpose: The use of this project. What can be achieved using this.

**Problem Definition & Design Thinking.** 

What is banking is a simple question. To define the term banking, you must say it is an

industry that deals with credit, cash, and numerous other transactions. A bank provides a secure

place where you can store some additional credit and cash. Banks also propose Certificates of

Deposit. Savings accounts and checking accounts. A bank uses various deposits for making

loans, and they comprise business loans, car loans, and home mortgages. Hence, banking is

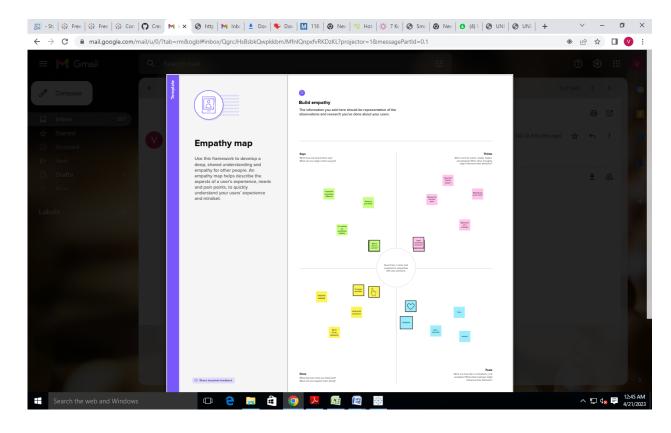
called the business activity to safeguard and accept money that other entities and people own

before this money is lent out for earning a profit.

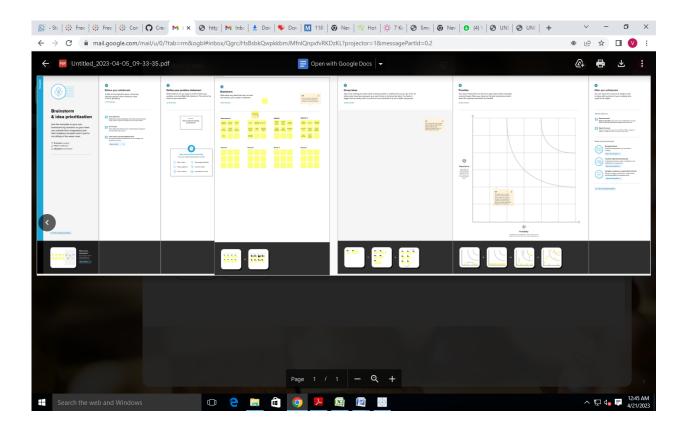
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## **PROBLEM DEFINITION & DESIGN THINKING**

## **EMPATHY MAP**



## IDEATION AND BRAINSTORMING MAP



## **EXPLAIN BANKING ACTIVITIES:**

banking activities have become widespread, and today, banks propose different other services. These days, banking services comprise the issuance of credit and debit cards. Again, banks also propose custody of people's valuable items. You can also get lockers, online transfers of funds, and ATM services from banks. The most important thing is every person is required to have basic banking knowledge



## Sheet 1



## **STRUCTURE OF A BANKING SYSTEM:**

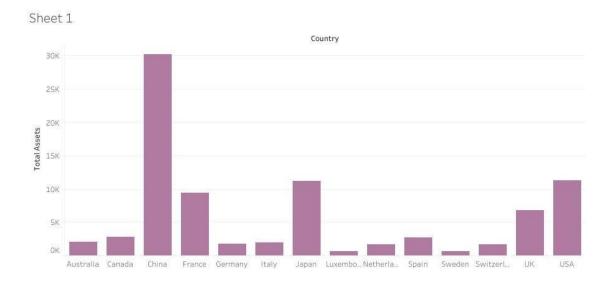
The banking system comprises some organizational features like: Unit banking Branch banking Group banking or holding company Chain banking Banking systems are also formed on some functions or techniques: Mixed banking Deposit banking Merchant banking Investment banking Group banking and chain banking are related to Unit Banking. The modern banking concepts have gone through a huge historical process based on geographical, political, and socioeconomic factors, as historical experiences do vary from one nation to another.



## **IMPORTANCE OF BANK:**

The importance of bank can't be denied at any point. Though banks do several things, their chief job is taking funds that are known as deposits. Banks lend them to people who require funds. The notable thing is banks work as intermediaries between depositors who lend cash to the banks and borrowers to whom the banks lend money. An amount the bank pays for the income, and the deposits it receives are known as interest. A depositor can be households, people, non-financial and financial firms, local governments, and national governments. Again, borrowers too can have these identities. A deposit is made obtainable on-demand, like a checking account or with a few restrictions, like time deposits and savings.

The most important role that a bank plays is matching up borrowers and creditors. A bank becomes important to the international as well as a domestic payment system, and it forms money. Contrary to popular belief, only individuals do not need money as governments and businesses are required to borrow and deposit money. In this aspect, a bank plays a pivotal role. Banks process payments, and they range from little personal checks to high-value electronic payments. The payment systems of banks are considered complex arrangements of national, local, and international banks. Most often, it includes private clearing facilities and government central banks that match up the things between banks.

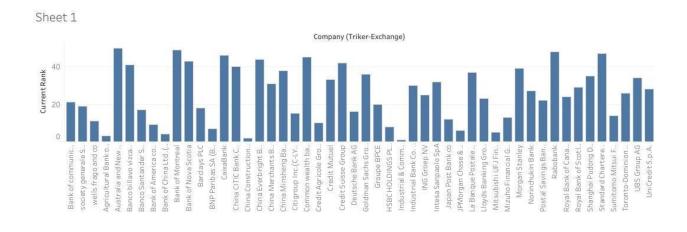


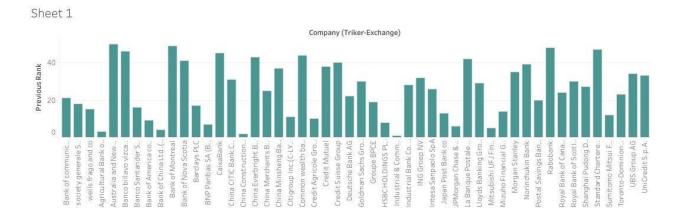
## **BANKING PROJECT:**



Every person needs money for some commercial or personal purposes. A bank happens to be the oldest lending institution as it proposes countless facilities to every citizen. To survive in this highly competitive market, every bank does implement innovative strategies, ideas, and progressive technologies. And so, for this purpose, banks give all the details about their projects

and institutions to people. Banks propose ample facilities for contending their customers. They provide mobile banking, net banking, instant facility door-to-door facility, Demat facility, investment facility, loans, advances, credit card facility, account facility, and lots more.

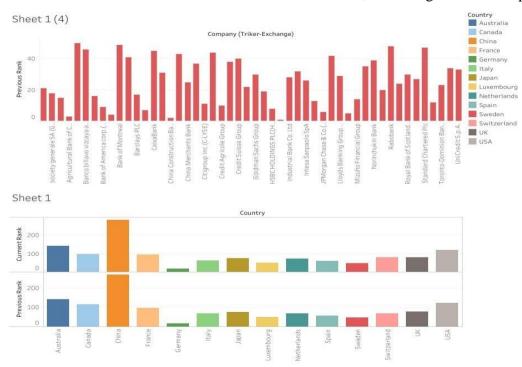




## **Brief Description About Project:**

## **Asset quality:**

The biggest risk to India's banks is the rise in bad loans. The slowdown in the economy in the last few years led to a rise in bad loans or non-performing assets (NPAs). These are loans which are not repaid back by the borrower. They are, thus, a loss for the bank. Net NPAs amount to only 2.36% of the total loans in the banking system. This may not seem like an alarming figure. However, it does not take into restructured assets – when a borrower is unable to pay back and the bank makes the loan more flexible to be paid back over a longer period of time. Restructured assets too put pressure on a bank's profitability. Together, such stressed assets account for 10.9% of the total loans in the system. And these are just loans which are identified as stressed assets. 36.9% of the total debt in India is at risk, according to an IMF report. Yet,



banks have capacity to absorb only 7.9% loss. So, if these debts turn bad too, banks will face major losses.

## Capital adequacy:

One way a bank tries to ensure it is protected from bad loans is by setting aside money as a 'provision'. This money cannot be used for any other purposes including lending. As a result, banks have lower capital available to use for its various operations. The Capital Adequacy Ratio measures how much capital a bank has. When this falls, the bank has to borrow money or use depositors' money to lend. This money, however, is riskier and costlier than the bank's own capital. For example, a depositor can withdraw his/her money any time they want. So, a fall in CAR (often called as CRAR or Capital to Risk Assets Ratio) is worrisome. In the last few years, CRAR has declined steadily for Indian banks, especially for public-sector banks. Moreover, banks are not able to raise money easily, especially public-sector banks which have higher number of bad loans. If banks do not shore up their capital soon, some could fail to meet the minimum capital requirement set by the RBI. In such a case, they could face severe issues.

#### **Unhedged forex exposure:**

"The wild gyrations in the forex market have the potential to inflict significant stress in the books of Indian companies who have heavily borrowed abroad," Mundra said in his speech. This stress can affect their ability to pay back debt to Indian banks. As a result, the RBI wants banks to ensure companies they lend to do not expose themselves to unnecessary debt in dollars.

## **Employee and technology:**

Public-sector banks are seeing more employees retire these days. So, younger employees are replacing the elder, more-experienced employees. This, however, happens at junior levels. As a result, there would be a virtual vacuum at the middle and senior level. "The absence of middle management could lead to adverse impact on banks' decision making process as this segment of officers played a critical role in translating the top management's strategy into workable action plans," the deputy governor said. Moreover, banks – especially government-owned banks – need to embrace technology to offer better products. This will also help make banks more efficient.

### **Balance Sheet management:**

In the past few years, many banks have tried to delay setting aside money as provisions (for future bad loans). One reason for this is that a bank's chief executives have a short tenure, during which time they want to post higher net profits and cheer investors. "It must be appreciated that CEOs/ CMDs would come and go but the institutions are perpetual entities. The only thing which can perpetuate their existence is a stronger and healthier balance sheet," Mundra said. Deferring provisioning is harmful in the long term. It reduces the bank's ability to withstand financial pressures. This is even more problematic considering the poor capital adequacy in Indian banks. In fact, investors would be more happy if the management addresses and sorts out problems rather than posting high net profits that cannot be sustained in the long term, the deputy governor said.



## **RESULT:**

Final findings (Output) of the project

## **DISCUSSED PROBLEM:**

#### Problem 1. Losses in Rural Branches:

Most of the rural branches are running at a loss because of high overheads and prevalence of the barter system in most parts of rural India.

## Problem 2. Large Over-Dues:

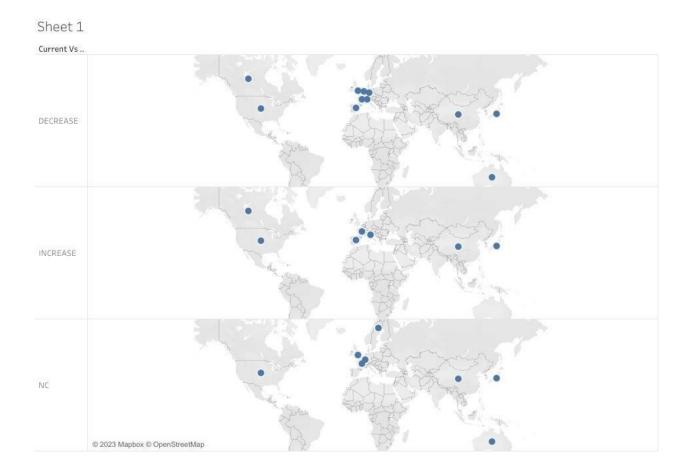
The small branches of commercial banks are now faced with a new prob•lem—a large amount of overdue advances to farm•ers. The decision of the former National Front Gov•ernment to waive all loans to farmers up to the value of Rs. 10,000 crores has added to the plight of such banks.

## Problem 3. Non-Performing Assets:

The commercial banks at present do not have any machinery to ensure that their loans and advances are, in fact, going into productive use in the larger public in terest. Due to a high proportion of non-performing assets or outstanding due to banks from borrowers they are incurring huge losses. Most of them are also unable to maintain capital adequacy ratio.

## Problem 4. Advance to Priority Sector:

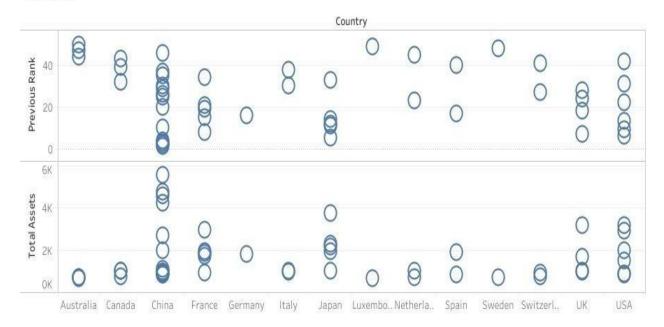
the progress has been slow. This is partly attributable to the fact that the bank officials from top to bot•tom could not accept nationalisation gracefully, viz., diversion of a certain portion of resources to the top priority and hitherto neglected sectors. This is also attributable to the poor and unsatis•factory loan recovery rates from the agricultural and small sectors.



Problem 5. Competition from Non-Banking Financial Institution:

As far as deposit mobilisation is con•cerned, commercial banks have been facing stiff challenges from non-banking financial interme•diaries such as mutual funds, housing finance cor•porations, leasing and investment companies. All these institutions compete closely with commer•cial banks in attracting public deposits and offer higher rates of interest than are paid by commer•cial banks.

Sheet 1



## **DATA ANALYTICS**

4	A	В	С	D	E	F	
1	CURRENT RANK	PREVIOUS RANK	CURRENT VS PREVIOUS	COMPANY (TRIKER-EXCHANGE)	COUNTRY	TOTAL ASSETS	BA
2	1	1	NC	Industrial & Commercial Bank of China Ltd.(1398-SEH	China	5.536.53	5
3	2	2	NC	China Construction Bank Corp.(939-SEHK)	China	4.762.46	
4	3	3	NC	Agricultural Bank of China LTD.(1288-SEHK)	China	4.575.95	
5	4	4	NC	Bank of China Ltd .(3988-SEHK)	China	4.206.53	
6	5	5	NC	Mitsubishi UFI Financial Group INC.(8306-TSE)	Japan	3.743.57	
7	6	6	NC	IPMorgan Chase & Co.(IPM-NYSC)	USA	3.176.84	
8	7	7	NC	BNP Paribas SA (BNP-ENXTPA)	UK	3,169,50	-
9	8	8	NC	HSBC HOLDINGS PLC(HSBA-LSE)	France	2.953.64	
10	9	9	NC	Bank of America corp.(BAC-NYSE)	USA	2.905.83	3
11	10	10	NC	Credit Agricole Group	China	2.674.35	
12	11	15	INCREASE	wells frago and co	France	1.948.07	
13	12	13	INCREASE	Japan Post Bank co	USA	1.998.98	
14	13	14	INCREASE	Mizuho Financial Group	Japan	1.957.87	1
15	14	12	DECREASE	Sumitomo Mitsui Financial Group INC.(8316-TSE)	Japan	2.176.94	
16	15	11	DECREASE	Citigroup Inc.(C-LYSE)	Japan	2.291.41	
17	16	22	INCREASE	Deutsche Bank AG	USA	1,505.74	
18	17	16	DECREASE	Banco Santander SA(SAN-BME)	Germany	1.814.90	3
19	18	17	DECREASE	Barclays PLC	Spain	1,874.40	
20	19	18	DECREASE	society generale SA (GLE-ENTPA)	UK	1,665.47	
21	20	19	DECREASE	Groupe BPCE	France	1.724.12	
22	21	21	NC	Bank of communications co.Ltd.	France	1.836.38	
23	22	20	DECREASE	Postal Savings Bank of China co.Ltd.	China	1.981.53	-
24	23	29	INCREASE	Lloyds Banking Group PLC	China	1,095.64	
25	24	24	NC	Royal Bank of Canada (RY-TSX)	UK	1.028.72	
26	25	32	INCREASE	ING Groep NV	Canada	1,013.65	,
27	26	23	DECREASE	Toronto-Dominion Bank (TD-TSX)	Netherlands	1.006.98	
28	27	39	INCREASE	Norinchukin Bank	Canada	1.006.70	
29	28	33	INCREASE	UniCredit S.p.A.	Japan	1.002.36	
30	29	30	INCREASE	Royal Bank of Scotland Group	Italy	995.73	4
31	30	28	DECREASE	Industrial Bank Co. Ltd	UK	985.646	
32	31	25	DECREASE	China Merchants Bank	China	966.117	
33	32	26	DECREASE	Intesa Sanpaolo SpA	China	954.531	,
34	33	38	INCREASE	Credit Mutuel	Italy	950.531	
35	34	34	NC	UBS Group AG	France	937.802	
36	35	27	DECREASE	Shanghai Pudong Development Bank co.Ltd.	Switzerland	942.777	
37	36	30	DECREASE	Goldman Sachs Group	China	916.787	
38	37	42	INCREASE	La Banque Postale SA	USA	873.419	
39	38	37	DECREASE	China Minsheng Banking Corp.Ltd.	China	859.407	
40	39	35	DECREASE	Morgan Stanley	China	851.733	
41	40	31	DECREASE	China CITIC Bank Corp.Ltd.	USA	832,996	
42	41	46	INCREASE	Banco billavo vizcava argentaria	China	826.597	
43	42	40	INCREASE	Credit Suisse Group	Spain	815.587	
44	43	41	DECREASE	Bank of Nova Scotia	Switzerland	754,509	
45	44	43	DECREASE	China Everbright Bank	Canada	750.775	
46	45	43	DECREASE	Common wealth bank of Australia	Australia	722.301	
47	46	45	DECREASE	CaixaBank	Netherlands	722.301	
48	47	45		Standard Chartered Plc	Australia	695.795	
49	48	1866	NC NC	Rabobank	Sweden		
50	49	48 49	NC NC	Radodank Bank of Montreal	Luxembourg	686.653 664.878	3
51	50	77	NC NC	bank of Montreal	Anetralia	004.070	

## **ADVANTAGES & DISADVANTAGES:**

List of advantages and disadvantages of the proposed solution

#### **ADVANTAGES:**

1. Create an engaging and differentiated customer experience.

Banks today have a differentiation problem. According to the research firm Forrester, one-third of customers say all banks are essentially the same. In an effort to pull away from the pack, it's critical for banks to create personalized experiences that surprise and delight their customers, making them feel like a valued individual rather than a collection of account numbers.

Conversational AI platforms can be implemented to fulfill customer requests, solve problems and predict customers' needs in ways that are as natural as texting a friend. In addition to this, some of the more advanced bots support omnichannel delivery, making it possible to interact with customers anytime, anywhere and allowing them to engage on the channel they most prefer, whether it's voice or text.

2. Change your relationship with customers from money mover to money manager.

Traditional banks aren't the only sheriffs in town. Digital-first challenger banks and fintech companies have burst onto the scene, providing modern experiences and championing customers' financial well-being. Although this altruistic mission has been associated with fintech companies, there is no reason traditional retail banks can't work with their customers to improve their financial health and become their go-to money manager.

Financial data is the key to boosting financial wellness. Traditional banks are sitting on a treasure trove of data that can unlock insights into customers' spending patterns and savings goals. Using AI, banks can proactively inform customers about their spending habits, how much debt they have, and where their savings and investments stand. Leveraging conversational AI means banks can transform raw data into relevant and actionable recommendations that can take the customer relationship from managing money day-to-day to helping them plan for major life moments, like getting married or buying a house.

#### 3. Increase the lifetime value of customers.

Conversational AI also enhances a bank's ability to build rewarding long-term relationships with customers. For example, some platforms can provide personalized recommendations with contextual offers for products and services and assist customers in making decisions about which loans, credit cards, savings and investment accounts are right for them. A branded virtual assistant gives you a vehicle to share those recommendations, and a unique opportunity to use data to proactively inform your customers and increase their share of wallet with you.

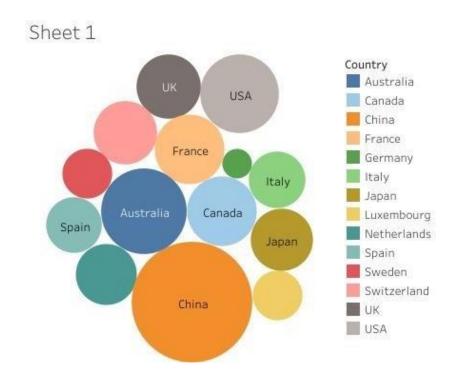
### 4. Decrease customer support costs.

Conversational AI can reduce costs by deflecting and triaging customer support inquiries without sacrificing the quality of the customer experience. For instance, DBS Bank's digital-only bank, digibank, requires only one-fifth of the resources of a traditional bank due to cost-saving features such as an AI-driven virtual assistant that is the face of the bank. The assistant handles

82 percent of all customer requests in the digibank application without needing to involve customer support staff, freeing these teams to focus on the tasks that require a human touch.

## **Build trust and loyalty.**

By providing their customers with proactive recommendations and helping them achieve their financial goals, banks can foster financial literacy and well-being. Conversational AI gives insights into spending, uncovering those insights to make customers more aware of their financial status and help them reach their goals. Rather than present the data in a static spreadsheet or long-form statement, AI powers human-like conversations to help build brand affinity and trust, fundamentally changing the relationship between bank and customer.



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**Availability of Cheap Loans** 

Before modern banks were established, people would borrow money from local money lenders, landlords, merchants, or other wealthy individuals. These loans were given at exorbitant interest rates that most people couldn't afford to pay. In the process, the borrower would always remain in debt. It was a vicious cycle. Modern banks started providing cheaper loans to the underprivileged section of society, breaking the whole expensive loans system.

### **Propellant of Economy**

Banks create money with a system called credit creation. With the help of credit creation, banks can lend a lot more money than the deposits that it holds. When banks lend this money to agriculture, industries, small businesses, and service providers, they are actually helping the economy grow exponentially. This, in turn, creates employment and spending power. Overall this one function of the bank is so powerful that the entire economy of any country relies on it.

### **Economies of Large Scale**

An extremely important benefit of any bank is its deep and wide reach through the branch banking system and the benefits of large-scale operations. The wider the bank can reach, the better services it can provide. Nowadays, banks offer services of net banking, card payments, ATMs, etc., in even the most far-fetched and backward areas. Due to these large-scale operations, the services have become extremely cheap or sometimes even free.

#### **Development in Rural Areas**

Banks aid rural development in more than one way. Firstly, the government makes it mandatory for the banks to lend to specialized sectors such as agriculture, rural infrastructure, etc. This leads to the development of modern infrastructure and methods in rural areas, thereby

bringing in growth. Secondly, with the banks opening their branches in the backward areas, the rural population has benefits of modern bank facilities such as check-in accounts, ATMs, locker facilities, etc. Furthermore, when a new bank branch opens in a village, it needs facilities such as 24-hour electricity supply, internet connection, new staff, etc. This creates employment, and the villagers can also benefit from facilities of electricity and internet.

#### **Global Reach**

Many banks operate at the multinational level, and this has helped people and businesses in a way that was not possible before the establishment of modern banks. Multinational banks aid in the remittance of cash, exchanging one currency for another; aid in export by transferring documents and payments; lend money to governments, institutions, and other world organizations. The reach of the banks is unlimited, and it has helped in making the world a global village.

#### **DISADVANTAGE:**

#### Risk of Fraud and Robberies

The rise in internet banking has given the rise in cybercrime as well. Now more people are exposed to the risk of credit card thefts, stolen passwords, net banking frauds, etc. There have been robberies where robbers have stolen millions of dollars through the internet without entering the bank premises physically. With the rise in internet banking, there will be a more innovative way for conmen and robbers to cheat people. This leaves the public vulnerable. This

also increases the expenses that banks have to incur to safeguard their systems, which are eventually charged to the customers.

#### Risk of Public Debt

This is not the risk of the bank per se, but this is the risk that people take on themselves while dealing with a bank. Say a person is in the habit of maxing out his credit card every month and repays the bare minimum, then he will spiral into debt very fast. The habit of borrowing more than a person can afford to repay is actually a personal bad habit. However, the easy lending policies of banks add fuel to the fire. This can be damaging to people's personal finances. It even affects businesses that take term loans and working capital loans from the banks and cannot repay them.

## **APPLICATIONS:**

The areas where this solution can be applied

## Digital Banking

The foremost and most important fintech app idea you can invest in is digital banking. In the past few years, a dramatic shift has been found in the way people interact with their banks and relish banking services. Users no longer appreciate the need to visit their local banks or ATMs for money transfer and other purposes. They rather are enjoying different advantages of digital banking like the ease of making transactions, investing, opening accounts and deposits, blocking cards, adding beneficiaries, and much more with a few taps on their devices.

With these facilities, the concept of investing in digital banking app ideas have grown a huge momentum in the market. The sector was catering only 9% of the online audience in 2011. But, in just 6 years, it became a part of 69% of the online audience. And what's more interesting is that it is just the beginning! Various factors like Coronavirus are acting as a catalyst for the market growth.

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### P2P Payment solutions

Seeing the rise in the peer-to-peer payment market, looking ahead to how to develop a P2P payment application is also a nice idea.

The P2P payment apps like Venmo, Google Pay, Zelle, and PayPal are providing consumers with an unmatchable facility to transfer money between bank holders instantly – even when registered with different banks and payment systems. They are cutting down the need for any third-party intermediaries or pay any commission fee for performing any transaction.

Also, these fintech mobility solutions are using the latest technologies like NFC and face and voice biometric technology to streamline the POS processing, enhance risk management, and deliver an optimal customer experience.

Find here p2p payment app development cost estimate

#### Personal finance management app

Personal finance management application is again one of the best financial app ideas to consider for diving into this market effortlessly.

With consumers getting more conscious about their earnings and savings, these applications are gaining traction in the market; making both investors and startups look ahead to developing personal finance app ideas.

These applications are acting as a weapon by which app users can categorize their expenses and incomes, and track them in real-time to get a better understanding of how to manage their finances smartly and effectively.

These personal finance app ideas, built on the rulebook of how to develop effective personal finance apps, are also offering them an ease to connect all bank and credit card accounts to automatically get the data updated, along with payment reminders. And the best part, the data is displayed in a visually appealing format, which adds to their convenience.

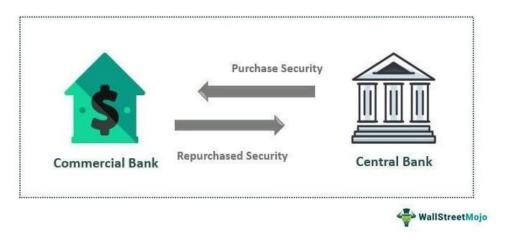


Robo advising software

Robo-advising, which is one of the proven ways fintech is attracting millennials, is also a great area for making an investment in the financial application development economy.

These machine-learning driven software are serving users with the finest of personalized and future-centric financial advice at lower costs. They are also analyzing their expenditures and investments to aid them in increasing their after-tax returns. In addition to this, they are adding convenience to the process with minimal-to-no human intervention.

# **Reverse Repurchase Agreement**



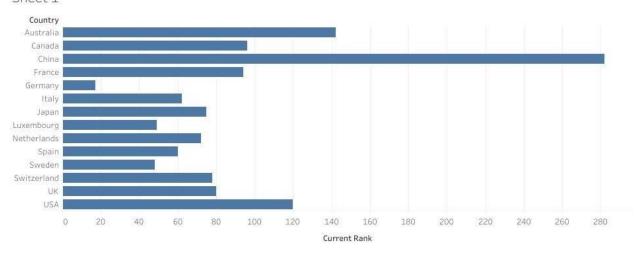
## **CONCLUSION:**

In Conclusion, banking holds a crucial role in our day-to-day life. We must adhere to the banking system as responsible citizens. The banking system acts as a crucial base for the financial system as well as the entire economic system of the country. It provides a base to the market and the companies. In a crux, we can say that it is the source of channeling the finance by the people of the country.

## Sheet 1



## Sheet 1



## 2. APPENDIX

## A.SOURCE CODE

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