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QUALIFYING MASTER'S THESIS

on the topic

**"STRATEGIC PRIORITIES OF INNOVATIVE DEVELOPMENT OF THE
BANKING SYSTEM"**

submitted by the applicant of higher education
Chen Jie Wei

The qualifying master's thesis was accepted for
defense by the decision of the Department of
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ASSIGNMENT
FOR A QUALIFYING MASTER’S THESIS
assigned to
Chen Jie Wei,

1. The topic of the thesis: "STRATEGIC PRIORITIES OF INNOVATIVE DEVELOPMENT OF THE BANKING SYSTEM"

Scientific advisor – PhD of Economics, Assoc. Prof. Valeriia Kochorba
(last name, first name, patronymic, academic degree, academic title)

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2. Deadline for submission of thesis by the student "18" of November 2024.

3. List of questions to be researched:

In chapter 1: Define banking innovation. Categorize financial innovations based upon various criteria such as technology, solutions, processes, etc. Analyze vital duties involved in the technology procedure, such as monitoring, workers, and customers. Explore different signs and versions that can be used to analyze the ingenious ability of commercial banks. Propose an analysis structure ideal for particular contexts .

In section 2: Offer an introduction of the bank's fundamental scenario and technological capabilities. Analyze its market placement and impact on the industry. Detail the cutting-edge jobs and techniques carried out by the bank. Compare and contrast with those of competitors. Measure the end results of the

campaigns taken utilizing measurable or qualitative methods. Offer referrals for improvement or future directions.

In chapter 3: Contrast successful situations from different nations and regions in advertising financial innovation. Summarize finest practices that can be adopted Identify key growth areas based on present market patterns and private needs. Design corresponding strategic plans. Check the efficiency of brand-new tools making use of suitable requirements and techniques. Provide a comments loop mechanism for continuous enhancement .

4. Plan of qualifying master's thesis

No	Name of work stages
1	Selection of the topic
2	Approval of the plan and tasks of thesis
3	Implementation of thesis
4	Submission of thesis to the department to check for the presence of borrowings from other documents
5	Completion of the admission procedure for the protection of thesis
6	Defence of thesis

5. Date of assignment issuance 25.09.2024

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ABSTRACT
ON QUALIFICATION MASTER'S WORK
«STRATEGIC PRIORITIES OF INNOVATIVE DEVELOPMENT OF
THE BANKING SYSTEM» OF

Chen Jie Wei

Qualification Master's Work contains 130 pages, 12 tables, 4 figures, 34 references, 3 appendices.

Object of research is the innovation activity of commercial banks on the example of Sichuan XinWang Bank.

Subject of research the strategic priorities of innovative development in the banking system, with a particular focus on the processes, strategies, and methods used to identify, implement, and evaluate these priorities.

Purpose of qualification master's work is to generalize the academic structures of the critical top priorities of cutting-edge advancement in the financial system, to reveal the existing method of setup and taking care of these priorities, and to discover ways to boost this practice based upon the system of existing propositions and study.

Tasks of qualification master's work are

- to explore the essence and category of banking advancements and their duty in the critical concerns of the banking system;
- to examine the role and job of taking care of the major elements of innovation procedures in the banking industry;
- to explore different signs and versions that can be used to analyze the ingenious ability of commercial banks;
- to define the technical and economic characteristics of Sichuan XinWang Bank;
- to carry out an evaluation of the innovative activities and efforts taken on by Sichuan XinWang Financial Institution;
- to examine the efficiency of the financial technologies carried out in Sichuan XinWang Financial Institution;
- to provide international and domestic experience of making sure the effectiveness of ingenious activities of the bank;
- to figure out priority locations of innovative development of credit organizations;
- to examine the performance of cutting-edge tools in the financial system.

According to results of the research, the results of the research study show that the strategic top priorities of cutting-edge development in the banking system are critical for keeping competitiveness and sustainability. The study offers an extensive evaluation of the innovative tasks at Sichuan XinWang Financial institution, highlighting both the stamina and areas for renovation. The research study also identifies crucial elements that add to the effective execution of calculated concerns, such as clear vision, resource allocation, and effective management structures.

The obtained results can be used in growth of the methodical bases to develop and boost the devices for ensuring the critical concerns of cutting-edge growth in the

financial system. These searching for can serve as a model for various other industrial financial institutions looking for to enhance their innovative capabilities and strategic direction, straightening with international criteria and best methods.

KEY WORDS: STRATEGIC PRIORITIES, INNOVATIVE DEVELOPMENT, BANKING SYSTEM, FINANCIAL INNOVATIONS, SICHUAN XINWANG BANK, EVALUATION METHODS.

CONTENT

INTRODUCTION		7
CHAPTER 1	THEORETICAL AND METHODOLOGICAL ASPECTS OF INNOVATIONS IN THE BANKING FIELD	10
1.1.	The essence and classification of banking innovations	10
1.2.	The role and task of managing the main elements of innovation processes in the banking sector	22
1.3.	Methods of evaluating the innovative activity of a commercial bank	33
CHAPTER 2	ANALYSIS OF PROVIDING INNOVATIVE DEVELOPMENT OF THE BANKING INDUSTRY ON THE EXAMPLE OF SICHUAN XINWANG BANK	48
2.1.	Technical and economic characteristics of Sichuan XinWang Bank	48
2.2.	Analysis of the innovative activity of Sichuan XinWang Bank	59
2.3.	Analysis of the effectiveness of financial innovations implemented in Sichuan XinWang Bank	74
CHAPTER 3	WAYS OF DEVELOPING INNOVATIVE STRATEGIES IN COMMERCIAL BANKS	83
3.1.	Foreign and domestic experience of ensuring the effectiveness of innovative activities of the bank	83
3.2.	Selection of priority areas of innovative development of credit organizations	96
3.3.	Evaluation of the effectiveness of innovative tools in the banking system	109
CONCLUSIONS		121
REFERENCES		126
APPENDICIES		130

INTRODUCTION

The rapidly progressing landscape of the international economy has actually positioned the financial system at the forefront of innovation, requiring a reevaluation of typical financial versions to resolve the challenges of technological improvement, customer preferences, and regulatory needs. This urgency emphasizes the relevance and importance of the selected subject, which is to check out the strategic concerns of ingenious development within the financial system, with a certain focus on Sichuan XinWang Financial institution as a study. The research intends to provide a clinical reason for the relevance and relevance of recognizing how financial technologies are applied, their influence on the financial sector, and their possibility for future development, which is vital for the monetary and credit system of Ukraine and beyond.

The theoretical base accumulated in the studies of experts such as: Huasanov, Q. N.H., Nozimov Eldor Anvarovich., H. M. M. Fairouz and C. N. Wickramasinghe and many others was taken into account. The works of marketers were also studied: Whaling, C. L., Khiaonarong, T., & Liebenau, J., Mihailovic and many other economists who have made major contributions to the theory of banking innovation. The works of scientists who focus on the the key determinants of innovation and developing appropriate strategies, were studied.

The main goal of this research is to synthesize the scholastic understanding of the essential top priorities in the innovation of financial systems, disclosing the existing methods of developing and managing these top priorities, and to determine ways to improve this practice based upon a system of existing suggestions and studies. To achieve this objective, the following tasks need to be attended to:

- to explore the essence and category of banking advancements and their duty in the critical concerns of the banking system;
- to examine the role and job of taking care of the major elements of innovation procedures in the banking industry;
- to explore different signs and versions that can be used to analyze the ingenious ability of commercial banks;

- to define the technical and economic characteristics of Sichuan XinWang Bank;
- to carry out an evaluation of the innovative activities and efforts taken on by Sichuan XinWang Financial Institution;
- to examine the efficiency of the financial technologies carried out in Sichuan XinWang Financial Institution;
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Object of research is the innovation activity of commercial banks on the example of Sichuan XinWang Bank.

Subject of research the strategic priorities of innovative development in the banking system, with a particular focus on the processes, strategies, and methods used to identify, implement, and evaluate these priorities.

A variety of basic scientific and unique research methods were utilized in the work, namely:

- Rational generalization and analysis - for the examination of academic frameworks and the synthesis of searching for from different researches on financial technology.
- System method - for the thorough analysis of the financial system and its elements, particularly in the context of technology fostering.
- Financial analysis - for the analysis of the economic effects of banking development, including cost-benefit analyses.
- Mathematical statistics - for the quantitative analysis of information connected to banking development and its impact on efficiency metrics.
- Concepts of ideal remedies - for the development of decision-making models in the context of development management.
- Formalization and modeling - to establish an evaluation design for the evaluation of the efficiency of banking innovation approaches.

The details base of this research is stemmed from data supplied by Sichuan XinWang Financial institution, the data source of Wind, and various other statistical resources. These resources form a durable foundation for the evaluation of monetary technology and its financial ramifications. The research likewise relies on legislative and normative sources, in addition to academic works from writers that have substantially contributed to the development of the study subject.

The scientific novelty of this research hinges on the growth of a substantial structure for understanding banking development, the solution of new scholastic meanings pertaining to the strategic importance of digital transformation in banking, and the provision of organized suggestions that are applied in practice and effect the success of brand-new economic outcomes. The practical significance of the results is evident in their prospective application for developing and enhancing the methodological bases for making certain the crucial priorities of innovative advancement in the monetary system. These searchings for can act as a version for other industrial financial institutions looking for to improve their cutting-edge capacities and calculated instructions, aligning with international criteria and finest techniques.

The study has actually been authorized by the V.N. Karazin Kharkiv National University, and the major results have been distributed through engagment in academic seminars and the magazine of clinical short articles, contributing to the body of knowledge in the field of monetary advancement and advancement.

This intro establishes the stage for a thorough expedition of the strategic priorities of innovative advancement in the banking system, supplying a clear roadmap for the research that adheres to.

CHAPTER 1

THEORETICAL AND METHODOLOGICAL ASPECTS OF INNOVATIONS IN THE BANKING FIELD

1.1 The Essence and Classification of Banking Innovations

Financial technology is an important element of the economic industry, playing a pivotal role in the field's growth and competition. Banks are important for the economy of any country (Mihailovic, 2009). The effective functioning of the banking sector influence the stability of economic growth(Rushchyshyn, N., Mulska, O., Nikolchuk, Y., Rushchyshyn, M. & Vasylytsiv, T., 2021). In order to succeed,banks should consider how they operate and what are their mission(Whaling, C. L. ,1996). In a swiftly developing economic landscape, the banking market should continually introduce to satisfy altering market and consumer needs, therefore enhancing its general competition. Technological revolution in the banking industry will change the traditional business(Wimboh Santoso, Palti Marulitua Sitorus, Sukarela Batunanggar, Farida Titik Krisanti, Grisnan Anggadwita, Andry Alamsyah, 2021)."The disruptive technology shaping the BFI as an ‘enabler’ than deliver the service or product "(H. M. M. Fairouz and C. N. Wickramasinghe,2019, p. 70).

In the last few years, international specialists have shown heightened passion and positive assessments in the direction of financial advancement. They see it as a critical driving pressure behind the advancement of the economic market, particularly amidst the background of globalization and digitization.

First of all, experts underscore the importance offintech. Emerging modern technologies such as artificial intelligence, big information, and blockchain are greatly changing the operational models and service shipment ofthe financial market. For instance, generative AI is being extensively applied in monetary research, threat

analysis, and compliance management, significantly boosting financial institutions' analytical capacities and risk avoidance degrees.

Second of all, financial development need to be centered around consumer requirements and market characteristics. Foreign business banks are introducing economic products and services to deal with the varied financial demands of their clients, thus reinforcing their market competition. Concurrently, they are leveraging technological innovations to enhance service effectiveness, reduce operational expenses, and achieve lasting growth.

Furthermore, professionals highlight that banking innovation should focus on the demands of the real economic climate, preventing excessive financialization and virtualization. Industrial financial institutions need to return to the significance of money, offering the real economy by leveraging financial advancements to sustain the premium, intelligent, and environment-friendly development of producing markets, consequently facilitating economic change and updating.

Table 1.1

Definition of banking/financial innovation according to different authors

Author	Approach to definition
Frame & White, 2004	Define financial innovation as new products, new services, new production processes or new organizational forms.
Solans, 2003	Define financial innovation as the act of creating and popularizing new financial instruments, technologies, institutions and markets.
Tufano, 2002; Lawrence, 2010	Define financial innovation as new products or new production processes to better perform their operations.
David T Llewellyn, 2008	Concern about financial innovation, especially the credit risk transfer tools, changed the business model of banks.
Popelo, O., Dubyna, M., & Kholiavko, N., 2021	Define financial innovations as an old phenomenon accompanying the technological innovations from the very beginning.
Kuznyetsova, A., Kozmuk, N., Zherybylo, I., Sydorova, O., & Zvarych, M., 2018	Focus on banks innovations embodied in new products and services, business processes and business model's improvement.

On the whole, these writers normally think that monetary advancement entails the growth of new products, the arrangement of new services, renovations in production and service processes, in addition to advancement in business designs. They highlight the crucial role of advancement in boosting the effectiveness of financial solutions, broadening market reach, boosting consumer complete satisfaction, and driving modifications in financial organization versions. In addition, some authors also mention the close connection in between economic innovation and technological growth, suggesting that technological innovation is a vital aspect driving monetary advancement.

To better specify on the relevance of financial development, it is vital to identify how it enables banks to adapt to the advancing market and client needs. This versatility is critical for maintaining a competitive edge in the dynamic financial landscape.

Enhancing Competition Through Development Adjusting to Market and Customer Needs altering Consumer Assumptions with the continuous development of innovation and the prevalent fostering of the web, consumer expectations for financial solutions have actually evolved. Customers currently demand more convenient, individualized, and efficient economic remedies beyond standard services such as deposits, withdrawals, and transfers.

Intro of New Technologies and Providers: By integrating new technologies, creating ingenious items, and embracing innovative service models, financial institutions can much better deal with the varied requirements of their clients. Market competition is the main incentive factor of bank innovation(Pu, R., Teresiene, D., Pieczulis, I., Kong, J., & Yue, X.-G. 2021).This not only brings in new consumers yet likewise increases the complete satisfaction and loyalty of existing ones, thereby improving the bank's one-upmanship. Banking technology allows banks to provide better services to customers safely, reliably and economically (Huasanov, Q. N. ,2022).

Below are some worldwide examples of exactly how banks have actually implemented technology to enhance their competition and adjust to market and consumer demands:

JPMorgan Chase (U.S.A.) - JPMorgan Chase, among the biggest banks in the United States, has actually welcomed artificial intelligence (AI) and machine learning (ML) to improve customer care experiences. For instance, it developed COiN, an AI-based virtual aide that improves paper review for industrial funding solutions, considerably increasing effectiveness and decreasing errors. Furthermore, JPMorgan Chase launched Chase Pay, a digital pocketbook that enables users to make online and in-store repayments quickly.

DBS Bank (Singapore) - DBS Financial institution, headquartered in Singapore, is extensively identified as one of one of the most innovative financial institutions. The bank has presented several digital services, such as Digibank, a totally paperless mobile financial application that makes it possible for customers to charge account, move money, spend, and more without going to a physical branch. Additionally, DBS has actually proactively embraced blockchain modern technology to streamline cross-border payment processes, raising transaction rate while lowering costs.

ING Group (Netherlands) - ING, a Dutch multinational banking and monetary services company, intends to be a leading electronic bank worldwide. ING focuses on providing high-quality online and mobile banking options and emphasizes creating more personalized user experiences. As an example, it launched the "Yolt" application, which helps consumers handle their individual funds by tracking costs and setting budget plan objectives. ING also provides an open financial system designed for small and medium-sized enterprises, facilitating more effective fund streams and collaborations between companies.

HSBC (UK/Hong Kong) - As a global financial institution, HSBC areas substantial significance on technological advancement to boost solution high quality. Over the last few years, HSBC has enhanced investment in biometric protection procedures, introducing fingerprint authentication login functions in certain areas, which boosts account safety and security and provides comfort for customers. The bank is additionally checking out using distributed ledger technology to improve profession money procedures.

These examples illustrate just how prominent banks from various nations and areas have leveraged the current technological fads to react to transforming customer assumptions, present innovative products and services, and keep a competitive edge. By continually innovating and offering exceptional solution experiences, these banks have successfully brought in new customers and enhanced the complete satisfaction and loyalty of existing ones.

Improving Solution Convenience and Efficiency Simplification of Business Procedures:

Streamlining Procedures: Standard financial procedures can be cumbersome and taxing, typically causing consumer discontentment. Innovation not only changes the way of banking services, improves the convenience of service, but also improves the quality of service, making banking services more personalized and high-end (Jatinder Kaur, 2020). Technology in the bank bring more efficiency and reduce operating costs (Achary, R., 2021). Technological innovation and process optimization make it possible for banks to simplify these processes, reduce unneeded actions, and enhance service efficiency.

Digital Programs: The introduction of mobile repayments, electronic banking, and various other electronic service channels allows customers to carry out purchases anytime and anywhere, significantly conserving effort and time. These digital solutions likewise enhance the automation of banking solutions, minimizing manual operations, minimizing mistakes, and boosting overall service quality.

Below are some worldwide instances of just how banks have applied innovations to improve service convenience and efficiency by streamlining service procedures and leveraging electronic networks.

Simplification of Organization Processes:

- Barclays (UK) - Barclays Pingit. Enhancing Workflows: Barclays introduced Pingit, a mobile payment service that permits customers to send and receive cash making use of just a smart phone number. This advancement streamlines the typical process of moving funds, which frequently required thorough savings account

details. Clients can now make deals rapidly and conveniently, enhancing convenience and decreasing the time and effort needed for payments;

- Nordea (Sweden) - Automated Account Opening. Automated Processing: Nordea has executed a fully automated online account opening up procedure. New clients can open a savings account in just a couple of mins using their mobile or computer without the requirement for in-person brows through or substancial documents. The whole process, from identity verification to account activation, is streamlined, significantly minimizing wait times and boosting the client experience;

- Bank of America (U.S.A.) - Erica Virtual Assistant. Smart Support: Financial institution of America developed Erica, an AI-powered digital monetary aide. Erica helps customers handle their financial resources, provides monetary recommendations, and can do complicated financial jobs such as transfers and equilibrium queries. This smart solution not just streamlines everyday financial administration for customers however also improves the overall performance of the bank's solutions.

Digital Channels:

- ING (Netherlands) - Yolt Application. Personalized Financial Monitoring: ING introduced the Yolt app, which helps consumers handle their individual funds better. The application enables customers to track costs, set spending plan objectives, and gain insights into their monetary behaviors. By offering these devices, ING provides an easier and personalized service, improving the user experience and cultivating much better financial monitoring;

- DBS (Singapore) - DBS PayLah! Seamless Settlement Experience: DBS PayLah! is a prominent e-wallet application in Singapore that sustains a large range of payment choices, including peer-to-peer (P2P) transfers, costs payments, and in-store purchases. The app likewise includes unique features like sending electronic red packets and making philanthropic donations, making monetary services a lot more incorporated right into everyday life;

- HSBC (UK/Hong Kong) - HSBC Mobile Banking Application. Comprehensive Digital Solutions: HSBC continually updates its mobile banking app to

offer a complete suite of digital banking services, including account administration, fund transfers, and charge card monitoring. The app also includes ingenious functions such as biometric login alternatives (finger print or facial recognition), boosting both security and convenience of use.

These instances demonstrate just how financial institutions worldwide are making use of technological advancements to streamline service procedures and deal efficient, convenient digital solutions, therefore boosting customer fulfillment and preserving an one-upmanship out there.

Lowering Operating Expense. Operational Effectiveness and Source Optimization:

- Automation and Expense Reduction: The application of automated bank employee makers (ATMs) and intelligent customer service systems can reduce the requirement for manual labor, therefore reducing functional prices. To the research (Nozimov Eldor Anvarovich, 2024), the operating expense is 40% lower than traditional bank. As an example, ATMs and self-service kiosks can handle regular purchases, freeing up team to focus on even more facility and value-added services;

- Data-Driven Decision Making: Making use of large information analytics, financial institutions can optimize source allocation and boost the utilization of both human and worldly resources. Data processing technology is closely related to the practice of providing services, both are the basis of customer (servicePu, R., Teresiene, D., Pieczulis, I., Kong, J., & Yue, X.-G., 2021). This data-driven strategy aids in identifying inefficiencies, simplifying operations, and inevitably lowering waste, which subsequently boosts productivity.

Here are some international instances of just how banks have applied technologies to reduce operating expense via functional effectiveness and source optimization:

Automation and Expense Decrease:

- Wells Fargo (United States) - Automated Bank Employee Makers (Atm Machines) and Self-Service Kiosks. Minimizing Manual Labor: Wells Fargo has extensively deployed Atm machines and self-service booths throughout its network. These makers deal with a wide variety of routine purchases, such as cash money withdrawals, deposits, and balance inquiries. By automating these jobs, the financial

institution decreases the demand for cashiers to deal with easy deals, enabling staff to focus on even more facility and value-added services like financial preparation and client connection management;

- Santander (Spain) - Digital Improvement and Robotics Process Automation (RPA). Efficient Back-Office Operations: Santander has actually invested in electronic makeover and RPA to automate back-office processes. For instance, RPA is used to refine mortgage applications, perform information entrance, and produce records. This automation not just reduces the demand for manual work however also reduces mistakes and speeds up handling times, bring about substantial price savings.

Data-Driven Decision Making:

- Citigroup (U.S.A.) - Big Data Analytics. Enhancing Resource Appropriation: Citigroup makes use of big data analytics to maximize its procedures. By examining large quantities of transactional and customer information, the bank can identify patterns and trends that assist in making educated choices regarding resource allowance. As an example, data analytics can reveal which branches or services are underutilized, permitting the financial institution to reapportion resources much more successfully. This data-driven approach assists in determining inefficiencies and improving operations, eventually reducing waste and enhancing success;

- Standard Chartered (UK) - Advanced Analytics and AI. Improving Operational Performance: Standard Chartered leverages innovative analytics and artificial intelligence (AI) to boost operational efficiency. The financial institution utilizes AI to anticipate and manage customer support demand, making sure that staffing levels are maximized based upon real-time data. Furthermore, AI is used to identify and stop scams, which not just saves costs associated with illegal tasks but additionally boosts the bank's security and reputation;

- ING (Netherlands) - Lean 6 Sigma and Continual Enhancement. Continuous Optimization: ING uses Lean Six Sigma methods to constantly improve its procedures and get rid of waste. By focusing on improving operations and eliminating non-value-adding tasks, the financial institution accomplishes substantial price reductions. As an example, ING has actually applied digital devices and platforms that permit real-time

monitoring and modification of procedures, making sure that sources are made use of as efficiently as feasible;

- BBVA (Spain) - Cloud Computing and Digital Operatings Systems. Cost-efficient Facilities: BBVA has moved a number of its IT procedures to the cloud, reducing the need for pricey on-premises infrastructure and maintenance. Cloud computing allows the financial institution to range sources up or down based upon demand, leading to much more efficient use of computing power and storage. This not just decreases IT prices however also gives better versatility and strength despite transforming business demands.

These examples illustrate just how financial institutions around the world are using automation, information analytics, and various other technical advancements to decrease operating costs, boost operational effectiveness, and enhance resource application. By doing so, they are able to offer better solutions to their clients while maintaining a strong economic placement.

In recap, financial innovation encompasses the integration of new modern technologies, the development of sophisticated product or services, and the optimization of organization procedures. These innovations are vital for financial institutions to remain affordable, satisfy the advancing demands of customers, and attain functional efficiency. By promoting a culture of innovation, financial institutions can not only boost their service high quality and client satisfaction however additionally decrease running prices, thereby improving their overall financial efficiency and long-lasting sustainability.

Categorization of Financial Innovations.

Experts have diverse and comprehensive views on the category of financial institution innovation, which can mainly be summed up from the complying with aspects: technical technology, service version innovation, solution technology, regulatory technology (RegTech), business framework advancement, and market technology.

Technical development is the core driving force of bank development. This includes system development, such as introducing brand-new technologies to

optimize settlement systems; large information applications, improving client experience and service high quality with information analysis; and the advancement and application of blockchain modern technology to achieve secure settlements and clear cross-border deals.

In regards to service design advancement, international specialists stress the significance of electronic financial institution transformation, creating on the internet solution networks and offering hassle-free mobile financial applications. At the same time, open banking services accept other financial institutions to share data and sources, offering more diversified solutions. Furthermore, tailored financial products give personalized financial savings and financial investment options according to client requirements.

Service technology concentrates on improving customer care experience, such as making use of chatbots to enhance communication effectiveness and implementing multi-channel incorporated solution techniques. At the same time, launching social responsibility investment products and strengthening economic education and learning and popularization are additionally essential components of service advancement.

In terms of governing technology (RegTech), the application of automated conformity devices and risk analysis versions helps to improve the rate and accuracy of financial institution compliance.

Organizational structure development emphasizes flat monitoring and agile development models to increase decision-making processes and constantly boost services and products.

Market development is mirrored in broadening new client teams and developing cooperative partnerships to accomplish the bank's international format and cross-border integration.

According to the criteria of the different classifications, technology within the banking sector can be generally categorized right into several key areas: electronic innovation, omni-channel advancement, and product innovation. Each group represents a distinctive approach to enhancing the customer experience, enhancing

operational performance, and expanding the series of economic services offered. Scientists distinguish financial innovation according to the source, motivation, type, application effect, factors affecting the process of innovation creation and implementation, the moment of innovation, and the elements of innovation in the financial system (Popelo, O., Dubyna, M., & Kholiavko, N., 2021).

Digital Innovation Definition.

Digital technology entails the introduction of advanced technical services to offer easier and effective financial services to customers. Digitization enables and attracts customers in non-traditional ways (Achary, R., 2021). The digital transformation changes the way customers do their banking (Omarini, A. E., 2018). This consists of the growth and release of mobile repayments, online banking, online applications, and other digital platforms. As a part of the payment system innovation, mobile payment is an indispensable infrastructure of the modern financial system (Khiaonarong, T., & Liebenau, J., 2009). The banking sector is undergoing major digital changes, particularly as online deposits, mobile applications, online loans, contactless payment systems, and many other electronic accounts that are undergoing fundamental changes (Nozimov Eldor Anvarovich, 2024).

Effect. Enhanced Effectiveness: Digital advancements significantly reduce the time required for customers to conduct purchases and boost the total handling efficiency. Digitization is about using technology and innovative technologies to improve the efficiency of specific processes (Nozimov Eldor Anvarovich, 2024). Customer experience, competition, and regulatory orders are the main drivers of the digital transformation (H. M. M. Fairouz and C. N. Wickramasinghe., 2019). As an example, Industrial Financial institution has leveraged digital development to present tools such as mobile payments and web banking, which have structured the procedure of taking care of financial deals for customers.

Boosted Availability. These technologies make it possible for customers to access financial solutions from anywhere anytime, thereby raising benefit and ease of access.

Omni-Channel Technology.

Omni-channel advancement focuses on developing a smooth and integrated service experience throughout multiple networks, both online and offline. This guarantees that clients get regular and high-grade service no matter the channel they select to interact with the bank.

Influence:

- **Smooth Integration:** With the establishment of an omni-channel solution system, banks can ensure that customers appreciate the exact same degree of service high quality whether they are utilizing online systems, mobile apps, or checking out physical branches;
- **Enhanced Customer Experience:** The use of smart terminal equipment, on-line customer service, and other devices allows consumers to perform various operations, such as inquiring equilibriums, moving funds, and handling their finances, anytime and anywhere. This integration brings banking services closer to the consumer, enhancing their general experience.

Product Development Definition.

Product innovation includes the growth and launch of new financial services and products that fulfill the varied and advancing requirements of clients. Service innovation plays an important role in the highly competitive banking industry, and banks can achieve higher profits through innovation (Zhao, Q., Tsai, P.-H., & Wang, J.-L. ,2019).This includes individual car loans, charge card, financial investment products, and other economic options.

Impact:

- **Meeting Diverse Requirements:** By introducing a wide variety of financial products, banks can cater to the diverse financial demands of their clients, giving them with even more choices and better convenience;
- **Market Responsiveness:** Product advancement allows financial institutions to remain affordable by reacting to market needs and offering tailored services that attend to details consumer requirements.

Technical and Non-Technical Innovations Technical Innovations:

- Blockchain Modern technology: Improves transaction protection and transparency;
- Expert System (AI) and Machine Learning (ML): Enhance customer service via chatbots and individualized referrals, and boost risk management with anticipating analytics;
- Big Data Analytics: Make it possible for better decision-making, customer segmentation, and targeted marketing;
- Cloud Computer: Give scalable and adaptable IT facilities, reducing expenses and boosting service shipment.

Non-Technical Developments:

- Product and Service Mode Advancement: Focus on the creation of brand-new economic products and the optimization of customer care procedures;
- Consumer Experience Improvement: Consists of the redesign of consumer trips, the simplification of application procedures, and the enhancement of interface to make banking extra user-friendly and easy to use.

The categorization of financial technologies into digital, omni-channel, and product advancements, in addition to the distinction in between technological and non-technical advancements, provides a thorough framework for recognizing the various ways in which financial institutions can drive change and improve their competition. By welcoming these different kinds of advancement, banks can not only satisfy the advancing needs of their customers but additionally achieve operational effectiveness and sustainable development.

1.2 The role and task of managing the main elements of innovation processes in the banking sector

Among the background of global economic assimilation and quick growth of fintech, banking development has become a crucial consider improving competitiveness, satisfying client demands, and driving transformation within the financial industry. International scholars have actually performed extensive research on

the banking innovation procedure, disclosing the roles and jobs of various key elements entailed. The adhering to description aims to sum up these research findings, supplying a reference for financial innovation methods.

Innovation. Modern technology works as the central pressure driving banking innovation. Financial institutions' R&D divisions utilize advanced monetary concepts and technological means to develop new solutions, establish ingenious organization support group and management information systems, and properly recognize, determine, check, and control dangers connected with economic innovation.

Modern technology plays a pivotal role in different stages of monetary development, from idea development to growth and launch. As an example, in the principle stage, modern technology aids in evaluating ingenious ideas; in the advancement stage, it sustains the layout and growth of service systems; and in the launch stage, it helps with marketing, layout, maintenance, and examination of monetary services.

The stability of modern technology is important for the success of economic technology. Banks require to make certain continual understanding and skill upgrading amongst technical employees to adjust to market modifications and developing client demands.

Strategy. Method works as the compass in the banking technology procedure. Based upon the overall growth strategy, the board of supervisors develops tactical choices concerning the instructions of the financial institution and economic technology, offering clear assistance for the development process.

Strategic planning includes incorporating numerous internal and outside sources to make sure the smooth execution of advancement tasks. This consists of maximizing and working with the appropriation of funds, manpower, innovation, and various other sources.

Strategic preparation additinally considers modifications on the market setting and client needs to make sure that ingenious products satisfy market demands and improve market competition.

Policy. Policy sets the standards that need to be followed in the financial technology process. Financial institutions are subject to the guidance and management of financial regulatory authorities, and their monetary innovation tasks have to abide by pertinent policies and policies. Policies give an institutional assurance and regulative framework for financial innovation.

Policies not only limit the limits of financial innovation however additionally guide and assistance financial institutions in the direction of innovations that benefit financial and and social advancement.

Policies play a crucial function in controlling threats connected with financial technology. By establishing strict threat control actions, plans assist make certain that financial institutions maintain steady operations throughout the development procedure.

Market. The market serves as a substantial chauffeur of financial innovation. Dynamic modifications in customer financial needs are the main resource of financial innovation. The business departments of financial institutions must proactively choose prospective consumer needs and determine opportunities for monetary technology.

Market responses is a crucial basis for evaluating the success of cutting-edge items. Financial institutions require to establish effective market comments devices to quickly comprehend consumer analyses and recommendations on cutting-edge products, allowing continual optimization and improvement.

Banks require to supply distinguished services and products to cater to the diverse requirements of various customer sections. This requires considering the features of various customer teams during the development process to give monetary products that fulfill their certain requirements.

Collaborating Mechanism. In the monetary innovation proces, specific slow-changing parameters (order parameters) fully establish the macro-behavior of the system and characterize its degree of orderliness. Technology, as an order parameter, governs the habits of various olther non-order specification aspects and dominates the advancement of the entire economic advancement procedure.

Developing a collaborating structure amongst development aspects reduces the complexity arising from researching numerous advancement aspects independently. The synergistic system assists in communications amongst numerous components, forming an organized technology operating mechanism to ensure the smooth progress of monetary advancement.

The synergistic system requires vibrant adjustments in response to modifications out there atmosphere, customer requirements, and technical growths. Financial institutions need to establish versatile devices to adjust to exterior changes and inner changes in advancement components.

Banking development is a complex and systematic process involving multiple crucial elements such as technology, strategy, policy, market, and the collaborating system. These components play distinctive roles and tasks in the innovation process, jointly driving the effective development of banking advancement. International scholars' research on the financial advancement process offers rich academic and useful guidance. In their advancement practices, banks should totally identify the roles.

The above components supply a macro-level instructions and support for banking advancement. Nonetheless, to convert these top-level strategies into substantial cutting-edge outcomes, it is additionally vital to concentrate on the specific execution measures and cultural setting within the company. Next, we will explore the key elements that can facilitate the rooting and prospering of innovative tasks in financial institutions.

Efficient monitoring of innovation processes in the financial sector entails several key elements, each playing an essential duty in cultivating a culture of constant improvement and driving effective technology. Innovation is described as, like many business functions, a management process that requires specific tools, rules, and disciplines (Davila, T., Epstein, M. J., & Shelton, R., 2006). The importance of understanding the key determinants of innovation and developing appropriate strategies when the banking industry introduces open innovation (Tornjanski, V., Marinković, S., Levi Jakšić, M., & Bogojević Arsić, V. ,2015).

The whole process of innovation in the banking market is multifaceted and requires an integrated and interdependent approach at all stages for responsible successful implementation, value-added customer experience and society(Panfil, C. ,2019).

Table1.2

Some theory about banking/financial innovation processes according to different authors:

Author	Approach to definition
Khraisha, T., & Arthur, K.,2018	Focus on the process of financial innovation : measurement, emergence, dissemination and evolution.
Relano, F., & Paulet, E. ,2016	Focus on two main theoretical perspectives of the banking innovation process: supply-driven innovation and demand-driven innovation.
Mousavi, S. F., Azar, A., & Khodadad, S. H. (2021)	Discuss about several major factors affecting the success of bank innovation management include leadership supporting innovation, market and customer orientation, information technology management, knowledge capital management, innovation opportunity identification, and innovation process management.
Ngo, N. D. K., Le, T. Q., Tansuchat, R., Nguyen-Mau, T., & Huynh, V.-N. (2024)	Conclude that managers should consider multiple innovation management practices to have a comprehensive understanding of their innovation process and regularly assess the degree of development of these practices and adapt innovation strategies to changes in the business environment.
Kiziloglu, M.,2015	Focus on the process of financial innovation : the generation of innovation needs, the research and collection of innovative ideas, the development stage, the application stage, and the commercialization stage.
Bajada, C., & Trayler, R. (2015)	Discuss possible obstacles in the banking innovation process, including resistance to change, challenges in building business cases, security concerns about new technologies, and market access restrictions.

In spite of differences in the specific facets stressed by different scholars, there is a general agreement that economic technology is a systemic venture, calling for a detailed consideration of multiple measurements such as technical advancements, market needs, organizational structures, and social ambiances. Effective administration practices are vital to conquer possible barriers, ensuring that technologies can be efficiently executed and accomplish their designated and

results. This section offers a comprehensive examination of these main aspects and their particular features and jobs.

Clear Objectives.

Duty: Clear goals work as the foundation and assisting concepts for the advancement process. They offer direction and purpose, ensuring that all employee understand the purposes and expected outcomes.

Tasks:

Positioning with Technique: Make certain that the advancement objectives are lined up with the overall method and vision of the bank.

Wise Principles: Set details, quantifiable, attainable, appropriate, and time-bound (WISE) objectives to facilitate clear and actionable targets.

Certain Example:

ING Bank's "Think Ahead" Approach: ING Bank released the "Assume Forward" strategy in 2014, intending to boost customer experience via electronic means. A vital goal was to boost the percentage of mobile financial to over 50% and considerably decrease the number of physical branches. By 2018, ING had exceeded this target, with over half of their clients using mobile financial, bring about the closure of many physical branches and significant cost financial savings.

Wells Fargo's Customer-Centric Goals: Wells Fargo developed a collection of customer-centric goals, such as boosting the electronic experience and streamlining processes. Among the goals was to decrease the moment it requires to open up a new account. Via a mix of digital tools and process improvements, the financial institution was able to substantially lower the account opening time, consequently improving consumer fulfillment and functional effectiveness.

Efficient Interaction.

Function: Efficient interaction is vital for the smooth flow of info and concepts, boosting partnership and count on amongst staff member. More people are needed in the process of innovation. They are specialists of some kind and need to communicate and collaborate with each other (Vermeulen, P. A. M. ,2001).

Jobs:

- Establish Channels: Develop and preserve open and reliable communication channels within the group, between teams, and with elderly administration;

- Active Paying Attention: Urge active listening and responses from employee to make sure that their opinions and ideas are listened to and thought about;

- Readjust Strategies: Usage feedback to make prompt adjustments to advancement methods and strategies.

Certain Instance:

BBVA and Work Environment by Facebook: BBVA carried out "Work environment by Facebook" to assist in the sharing of information, involvement in conversations, and the tip of new ideas. This platform enhanced worker involvement and cross-departmental cooperation, causing faster and more reliable task launches, such as the rollout of a new mobile app.

HSBC's Internal Social media network: HSBC developed an internal social network, "HSBC Connect," to cultivate a culture of open interaction and idea sharing. The platform permitted workers to upload updates, share best techniques, and take part in discussions, which assisted in breaking down silos and promoting a much more natural and joint workplace.

Motivating Innovative Thinking.

Duty: Cultivating an atmosphere that encourages ingenious thinking is vital for creating creative and unique concepts.

Tasks:

- Grow an Open Society: Produce an open, inclusive, and supportive business society that values and compensates technology;

- Incentive Mechanisms: Apply motivation and reward systems to inspire and acknowledge innovative contributions;

- Training and Development: Offer systems for development training, workshops, and sharing sessions to enhance the abilities and expertise of employee.

Specific Example:

Barclays Surge Centers: Barclays developed Increase facilities worldwide, working as incubators for start-ups and providing possibilities for Barclays' workers to work together with these start-ups. This cooperation caused the quick adoption of innovative innovations like blockchain and AI, placing Barclays as a leader in fintech development.

DBS Bank's Hackathons: DBS Bank frequently hosts hackathons, uniting both staff members and external individuals to resolve details business challenges. These occasions have caused the development of brand-new products and services, such as a streamlined, user-friendly application for consumer onboarding, and have actually fostered a culture of innovation and partnership.

Source Support.

Function: Appropriate sources are vital for the successful implementation and sustainability of technology tasks.

Tasks:

- Give Resources: Make certain the schedule of essential economic, technical, and personnels to support innovation campaigns;
- Enhance Allowance: Effectively allot and take care of resources to maximize their usage and effect;
- Sustainable Growth: Make certain that resource appropriation sustains the long-lasting sustainability of advancement activities.

Specific Example:

JPMorgan Chase's Technology Innovation Fund: JPMorgan Chase established a multi-billion-dollar fund to invest in emerging modern technologies, focusing on locations like repayments, cybersecurity, and data analytics. This investment enabled the bank to develop the Interbank Information Network (IIN), a blockchain-based system that improves cross-border repayments and has been adopted by numerous financial institutions, minimizing purchase times and costs.

BNP Paribas' Advancement Budget Plan: BNP Paribas designates a significant part of its spending plan to technology, sustaining numerous efforts, including the development of a new electronic platform for wide range monitoring. This platform,

powered by AI, offers tailored financial investment guidance and profile administration, improving the client experience and positioning BNP Paribas as a leader in electronic riches monitoring.

Development Society.

Duty: A strong advancement society is the soft power that drives and sustains innovation efforts.

Jobs:

- Foster a Positive Atmosphere: Grow a society that motivates trial and error, tolerates failure, and promotes continuous discovering;

- Internalize Values: Distribute and internalize the values and habits that sustain development, making them apart of the company's DNA. To the research, there is a significant positive correlation between organizational culture and organizational innovation and company performance (Uzkurt, C., Kumar, R., Kimzan, H. S., & Eminoğlu, G. 2013);

- Encourage Employees: Encourage workers to rock the boat and seek new and much better ways of doing things.

Certain Instance:

DBS Financial institution's "Joyful Financial" Effort: DBS Bank released the "Joyful Banking" initiative to create a positive and interesting workplace. This consists of acknowledging and rewarding ingenious ideas and empowering workers to take ownership of their tasks. The effort has brought about a much more motivated and involved workforce, with a higher price of employee-led technologies.

Scotiabank's Advancement Hubs: Scotiabank established development hubs in key areas, such as Toronto and Mexico City, to promote a culture of innovation. These centers supply a room for staff members to collaborate, experiment, and develop new ideas. The hubs have been instrumental in developing a much more ingenious and forward-thinking society within the bank.

Team effort.

Function: Efficient synergy is important for the success of technology jobs, as it leverages the varied abilities and viewpoints of staff member.

Jobs:

- Partnership Mechanisms: Develop mechanisms that promote partnership, info sharing, and harmony amongst staff member;
- Group Building: Enhance team communication and a feeling of belonging with team-building activities and campaigns;
- Assistance Equipments: Give the needed support and sources to enable effective synergy and partnership.

Particular Instance:

UBS's Cross-Functional Project Teams: UBS created cross-functional job teams to tackle complex obstacles, such as the growth of a new robo-advisory solution. These teams included participants from numerous divisions, such as IT, conformity, and advertising, making certain that all aspects of the job were addressed. This collaborative approach led to an effective launch and positive customer comments.

Royal Bank of Canada's Development Labs: Royal Financial Institution of Canada (RBC) established advancement labs where cross-disciplinary groups work on developing and evaluating new products and services. These labs combine employees from various histories, consisting of money, innovation, and layout, to produce a collaborative and vibrant environment. One notable result was the development of a new AI-powered individual money aide, which was favored by clients.

Continuous Renovation.

Role: Continual improvement makes sure that the technology process continues to be dynamic and receptive to altering requirements and challenges. Banks need to constantly adapt to the dynamic changes of the current and future business environment, and innovation has become the key to their adaptability and landmark(Uchupalanan, K., 2000). The bank innovation process includes fundamental innovation and incremental innovation (Bátiz-Lazo, B., & Woldesenbet, K., 2006)

Tasks:

- Representation and Examination: Consistently review and review the progress and end results of development tasks;

- Comments Systems: Establish mechanisms for ongoing comments and analysis, motivating energetic participation from staffmember;
- Adjust and Maximize: Use comments to adapt and enhance the development process, improving the high quality and efficiency of innovation tasks.

Certain Instance:

HSBC's Agile Technique in Software Program Advancement: HSBC adopted an agile method, permitting fast model of items based upon individual feedback. For example, when creating a new online banking feature, HSBC teams can swiftly integrate individual responses, resulting in a more intuitive and user-friendly user interface. This active strategy enabled HSBC to remain ahead of rivals and deliver an exceptional consumer experience.

American Express's Lean 6 Sigma: American Express carried out Lean Six Sigma methods to continually enhance its processes. By concentrating on removing waste and minimizing variability, the company has actually had the ability to streamline procedures, decrease expenses, and enhance consumer complete satisfaction. As an example, the application of Lean Six Sigma in the charge card approval process resulted in a significant decrease in processing time and an increase in approval prices.

Risk Monitoring.

Function: Effective threat administration is crucial for recognizing, analyzing, and mitigating prospective dangers in the technology procedure.

Tasks:

- Risk Identification: Recognize and assess potential dangers related to development tasks;
- Control Steps: Establish and execute control procedures and contingency strategies to handle and mitigate identified dangers;
- Surveillance and Review: Constantly monitor and assess the threat administration process to guarantee its performance and make necessary adjustments.

Specific Instance:

Citi's Danger Assessments for New Technologies: Citi performs extensive threat assessments for every new technology or service. As an example, before launching a new AI-driven chatbot, Citi carried out a comprehensive danger analysis, identifying possible security vulnerabilities and personal privacy problems. Based upon this analysis, Citi applied proper safeguards, such as encryption and normal safety audits, to shield customer data and guarantee the secure implementation of the chatbot.

Deutsche Bank's Cybersecurity Framework: Deutsche Bank created a durable cybersecurity structure to take care of and reduce threats related to electronic advancement. The structure includes normal safety and security analyses, worker training, and progressed danger discovery systems. This positive approach has actually assisted the bank to avoid and reply to cyber risks, making sure the safety of its electronic systems and client data.

The primary elements of the advancement monitoring process - clear objectives, effective interaction, urging ingenious reasoning, source support, development society, team effort, constant renovation, and danger administration - play indispensable roles in driving and sustaining technology in the banking market. These aspects are related and equally strengthening, jointly developing a robust system that sustains the financial institution's capacity to innovate and stay competitive in a swiftly progressing market. By efficiently handling these components, banks can develop a favorable atmosphere for advancement, resulting in improved solution top quality, enhanced client complete satisfaction, and lasting development.

1.3 Methods of evaluating the innovative activity of a commercial bank

In the context of globalization, technology tasks in business financial institutions have become a considerable driving pressure for the development of the monetary sector. To clinically and systematically evaluate these technology activities, worldwide scholars have actually suggested numerous assessment methodologies that encompass not just item technology however likewise the development environment, investment,

output, and effectiveness. This record aims to summarize the research searchings for of international scholars in this area, offering theoretical support and functional assistance for the evaluation of business financial institutions' advancement tasks.

Significant Approaches for Reviewing Innovation Activities in Commercial Financial Institutions:

- Product Portfolio Matrix Approach.

The Item Profile Matrix Method, suggested by the Boston Consulting Team (BCG), is commonly utilized to examine industrial banks' product profiles. By building a matrix, this approach adequately examines existing items from numerous angles, including calculated relevance, competitiveness, manufacturing intricacy, interdependence with various other products, and future possibility. For brand-new products, the method evaluates future chances and risks based upon 3 dimensions: market need, technological expediency, and economic benefits. This strategy helps industrial financial institutions identify high-potential items and troublesome ones, therefore maximizing their product portfolios.

Case Study 1: HSBC

HSBC, a global financial and monetary solutions organization, uses the Product Profile Matrix to handle its vast array of economic products. For example, HSBC's individual electronic banking solution could be categorized as a "Cash Cow" as a result of its secure market share and regular earnings in several markets. Conversely, a freshly released electronic wide range administration platform might be considered a "Enigma" as it remains in a growing market yet has yet to develop a considerable market visibility. By utilizing this matrix, HSBC can strategically assign resources to maintain and expand its "Golden goose" products while purchasing the possibility of "Enigma" items.

Case Study 2: Citibank

Citibank, another worldwide leader, used the Product Portfolio Matrix to its charge card offerings. Its rewards bank card, which offers travel factors and cash back, could be a "Star" product, provided its high market share and growth potential. On the other hand, a niche co-branded credit card with a particular store may be a "Pet dog" if

it has a little and declining market. This analysis helps Citibank concentrate on strengthening its "Celebrity" items and perhaps eliminating or rearranging "Pet dog" products.

- RMS + NPS Evaluation Technique.

The RMS + NPS Assessment Method, presented by Bain & Firm, reviews product competition in two dimensions: Relative Market Share (RMS) and Internet Promoter Score (NPS). RMS analyzes a product's market efficiency by determining its profit and development potential, while NPS evaluates just how well the item fulfills client demands based on factors such as product attributes, service top quality, sales efficiency, branding and marketing performance, and network distribution. This approach supplies a detailed view of a product's market performance and client complete satisfaction, guiding commercial banks' enhancement efforts.

Case Study 1: Wells Fargo

As formerly stated, Wells Fargo made use of the RMS + NPS Analysis Technique to analyze its enhanced checking account. The product had a high Relative Market Share (RMS) and a strong Net Promoter Score (NPS), suggesting both market success and client fulfillment.

Case Study 2: Santander

Santander, a Spanish multinational commercial financial institution, used the RMS + NPS approach to its mobile repayment solution, "Pago Express." The product had a modest RMS but a very high NPS, suggesting that while it had not been the market leader, consumers were very pleased. This understanding led Santander to invest more in advertising and customer acquisition to raise its market share.

- Accenture's Item Aspect Evaluation Technique.

Accenture's Item Variable Evaluation Technique chooses parts that constitute product competition based upon the item being evaluated. It designates weights per element based upon its value and calculates the product's overall competitiveness score by weighted summation of specific variable ratings. This method makes it possible for

measurable analysis of item competitiveness, providing data assistance for industrial banks' decision-making.

Case Study 1: UBS

UBS, a Swiss international economic solutions business, made use of Accenture's Product Variable Assessment Method to analyze its riches administration system. Aspects such as user interface, security, and assimilation with various other financial tools were weighted and scored. The analysis highlighted areas for improvement, especially in the user interface, resulting in a redesign that enhanced the general customer experience.

Case Study 2: Deutsche Bank

Deutsche Financial institution applied this method to its business banking website. The examination included elements like transaction processing rate, security, and customer assistance. The analysis showed that while the site was protected, it needed improvements in purchase rate and consumer assistance. This resulted in targeted enhancements that that improved the portal's general competitiveness.

- Six-Factor Analysis Technique.

The Six-Factor Evaluation Approach takes into consideration six elements: amount, variety, item performance, advertising, prices, customer support, and client evaluations. Experts assign ratings to every element, and web site assessments are also integrated to establish the overall rating. This straightforward method thoroughly shows various facets of a product, serving as an efficient device for business financial institutions to evaluate ingenious items.

Case Study 1: DBS Bank

DBS Financial Institution, a Singaporean multinational banking and economic services company, utilized the Six-Factor Analysis Approach to evaluate its mobile banking app. The app was evaluated on elements such as the variety of active users, variety of services, interface, advertising, prices, and customer support. The analysis helped DBS identify that while the application had a large customer base and a wide

variety of services, it required to boost its interface and consumer support. Succeeding updates resulted in a much more user-friendly and supportive application.

Case Study 2: BNP Paribas

BNP Paribas, a French international financial team, used the Six-Factor Evaluation Approach to its on-line financial investment system. The system was assessed on the number of customers, variety of investment options, performance, advertising, pricing, and client assistance. The evaluation revealed that while the platform provided a great variety of investment choices, it required to improve its user interface and advertising and marketing techniques to attract even more individuals. BNP Paribas then focused on these areas to boost the platform's appeal and functionality.

Commercial Bank Innovation Index System.

International scholars have additionally suggested building a development index system to review industrial banks' advancement activities. This system focuses on 4 aspects: development environment, investment, output, and effectiveness. To the research, metrics used to measure innovation include input indicators (e. g., human or financial capital in research and development activities) and output indicators (such as number of patents or number of innovations implemented) (Zaleska, M., & Kondraciuk, P., 2019).

Advancement Environment Index: Measures the bank's ability base, employee structure, and incentives for drawing in and keeping ingenious ability. Indicators include the proportion of extremely informed staff members, technology/R & D staff, and typical wages.

Innovation Financial Investment Index: Reflects the bank's financial, human, and business sources committed to advancement. Indicators consist of the number of technology/R & D personnel, IT investments, the percentage of technology financial investments in earnings, and the variety of R&D establishments.

Innovation Output Index: Due to the scarcity of direct output indicators, this index focuses on intermediate results such as study capabilities, technological and

intellectual property, market acknowledgment, and honors. Standardized indicators include publications, licenses, hallmarks, and honors.

Development Performance Index: Assesses the earnings, expense savings, financial advantages, and social duty originated from advancement. Indicators consist of cost-to-income proportion, per head earnings and profit generation, and ESG ratings.

Case Study 1: ING Team

As previously discussed, ING Group uses a technology index system to determine its development. The financial institution has a high proportion of extremely enlightened staff members, a solid R&D team, and eye-catching rewards for innovation. ING has additionally invested considerably in fintech collaborations and inner R&D, resulting in numerous honors and recognitions for its advancements and a strong ESG ranking.

Case Study 2: BBVA

BBVA, a Spanish multinational financial services business, utilizes a technology index system to track its innovation atmosphere, financial investment, output, and effectiveness. The bank has a strong focus on digital improvement, with a considerable portion of its labor force committed to R&D. BBVA's development result consists of countless patents and honors, and its efficiency is mirrored in its cost-to-income ratio and ESG scores.

Examination Refine and Methodology for New Item Proposals:

- Pre-evaluation Preparation

Goal: To collect and organize all essential info and documents required for a complete assessment of the new item proposal.

Steps:

- Comprehensive Development Proposition;
- Target Customers: Plainly specify the primary and secondary consumer sectors that the product is intended to serve. Consist of group and psychographic information;

- Secret Demands: Recognize and express the particular demands and pain points that the item intends to address. This need to be based upon market research and customer understandings;
- Product Meaning: Offer a clear and succinct description of the product, including its functions, advantages, and unique worth recommendation.
- Functional Setting: Define how the product will certainly be delivered and handled, consisting of the technological framework, operational procedures, and any third-party assimilations.
- Main Functions: Checklist and discuss the core performances and attributes of the product, highlighting how they fulfill the identified vital demands.

Study 1: JPMorgan Chase & Co. - Mobile Settlement Service

JPMorgan Chase established a new mobile repayment remedy called "Chase Pay." During the pre-evaluation phase, the bank prepared a detailed proposition that included:

- Target Individuals: Tech-savvy millennials and small business proprietors;
- Key Demands: Faster and easier repayment alternatives, smooth integration with existing banking solutions, and enhanced safety and security;
- Item Definition: A mobile app that allows individuals to make contactless settlements, handle accounts, and access unique offers;
- Operational Mode: The app would incorporate with the financial institution's existing mobile financial platform and utilize NFC (Near Area Communication) innovation;
- Key Functions: Contactless settlements, account administration, commitment incentives, and in-app promotions.

Case Study 2: BBVA - Personal Financial Monitoring Tool

BBVA presented a new personal economic administration device called "BBVA Compass ClearPath." The pre-evaluation preparation consisted of:

- Target Customers: Youthful specialists and family members wanting to much better manage their financial resources;

- Secret Demands: Streamlined budgeting, automated financial savings, and customized financial advice;
- Item Meaning: An online and mobile tool that provides customers with a detailed view of their financial circumstance, including costs patterns, savings objectives, and investment possibilities;
- Operational Setting: The device would certainly integrate with BBVA's existing electronic banking system and usage AI to provide tailored economic understandings;
- Main Functions: Budget monitoring, goal setting, automated financial savings, and monetary advice.

- Item Advantage Element Evaluation

Goal: To assess the potential benefits and worth of the brand-new product from different perspectives, including economic, operational, and critical.

Actions:

Entail Relevant Departments: Engage key stakeholders from various departments, such as item development, money, advertising, and operations, to evaluate the product's possible influence.

Assess Matching Indicators: Evaluate the product based on predefined indicators, such as:

- Financial Impact: Profits possibility, cost of growth and upkeep, roi (ROI);
- Functional Efficiency: Integration with existing systems, ease of execution, scalability;
- Strategic Placement: Fit with the bank's lasting approach, competitive advantage, and positioning with market patterns;
- Consolidate Scores and Analysis Record: The product development division combines ball games and feedback from all departments and prepares a detailed evaluation record.

Case Study 1: JPMorgan Chase & Co. - Mobile Settlement Service (Proceeded).

Financial Impact: The product advancement group approximated the possible income from transaction fees and the price of establishing and preserving the app.

Functional Effectiveness: The IT and procedures groups examined the assimilation with existing systems and the ease of carrying out the brand-new technology.

Strategic Placement: The advertising and marketing and method teams examined exactly how the new app lined up with the financial institution's goal of becoming a leader in electronic payments.

Case Study 2: BBVA - Personal Financial Administration Device (Continued).

Financial Effect: The finance group predicted the potential income from registration costs and the expense of creating and sustaining the device.

Functional Effectiveness: The IT and operations groups assessed the combination with the existing electronic banking system and the scalability of the AI-driven attributes.

Strategic Positioning: The technique team assessed how the device straightened with BBVA's mission to encourage clients with monetary expertise and tools.

- Product Competitiveness Factor Evaluation.

Purpose: To review the product's competition in the marketplace, focusing on client contentment and market positioning.

Actions:.

- Customer Fulfillment Studies: Conduct surveys and collect comments from prospective customers to understand their perceptions and choices;
- Competitor Evaluation: Analyze the toughness and weak points of competing products and determine areas where the brand-new product can distinguish itself;
- Market Positioning: Analyze the product's positioning in the market, including its unique selling points, target audience, and competitive landscape;
- Numerous Dimensions of Competitiveness: Evaluate the item across multiple dimensions, such as:

- Product Attributes: Functionality, usability, and development;
- Service Quality: Client assistance, reliability, and responsiveness;
- Sales Performance: Advertising and sales strategies, circulation networks;
- Branding and Advertising Effectiveness: Brand recognition, marketing campaigns, and client interaction;
- Network Circulation: Availability and ease of access of the item.

Case Study 1: JPMorgan Chase & Co. - Mobile Repayment Remedy (Continued).

Consumer Satisfaction Surveys: JPMorgan Chase carried out studies amongst tech-savvy millennials and small business proprietors to gauge their passion and preferences for the brand-new mobile settlement option.

Rival Analysis: The bank assessed rivals like Apple Pay, Google Pay, and other mobile repayment services to identify key differentiators.

Market Positioning: The product was positioned as a safe, fast, and integrated payment solution, leveraging the bank's online reputation and existing consumer base.

Numerous Measurements of Competition:

- Item Features: Contactless repayments, account administration, and in-app promotions;
- Service Top quality: 24/7 consumer assistance and real-time deal monitoring;
- Sales Efficiency: Hostile marketing campaigns and partnerships with retailers;
- Branding and Advertising Performance: Solid brand name acknowledgment and targeted marketing to the identified target customers;
- Network Circulation: Extensive availability via the financial institution's extensive network and collaborations.

Case Study 2: BBVA - Personal Financial Administration Device (Proceeded).

Client Complete Satisfaction Studies: BBVA surveyed young experts and families to recognize their economic management requirements and choices.

Rival Analysis: The financial institution compared its tool with comparable products from rivals like Mint and Personal Resources to highlight its distinct attributes.

Market Positioning: The device was placed as an user-friendly, AI-powered financial monitoring service that provides personalized understandings and suggestions.

Numerous Dimensions of Competitiveness:

- Product Attributes: Spending plan monitoring, setting goal, and automated savings;
- Service High quality: Robust consumer support and constant updates based upon user comments;
- Sales Effectiveness: Targeted advertising and marketing to young professionals and households, and assimilation with the bank's existing solutions;
- Branding and Marketing Effectiveness: Focus on the financial institution's commitment to financial education and empowerment;
- Network Distribution: Available with the bank's online and mobile banking systems.

By following this structured assessment procedure, business financial institutions can make informed choices concerning new product propositions, ensuring that they align with calculated objectives, satisfy client needs, and are competitive on the market.

International scholars have actually recommended varied techniques for reviewing development tasks in business financial institutions, covering product development, the development atmosphere, financial investment, result, and efficiency. These methods offer scientific and methodical devices for business financial institutions to analyze their advancement tasks, maximize resource appropriation, and boost their ingenious capacities, ultimately maintaining a competitive edge in the intense market.

To ensure an extensive and efficient evaluation of development tasks in commercial financial institutions, it is essential to incorporate the various techniques proposed by international scholars with essential signs relevant to the actual procedures of banks. By integrating factors to consider such as product innovation, the innovation setting, investment, output, and efficiency, financial institutions can establish an extra refined evaluation system. Such a system not only helps banks much better recognize

their own development efficiency and potential but additionally guides them in formulating strategies within the rapidly altering economic landscape, going for sustained growth and improved competitiveness. Next, we will certainly explore just how these essential indications and techniques can be specifically related to gauge the technology capabilities and real end results of financial institutions.

Examining the ingenious activity of a commercial financial institution calls for a multidimensional method that incorporates different aspects such as monetary services and products, technological innovations, management techniques, and general market influence. This section outlines crucial signs and methods for assessing the advancement abilities and performance of banks.

- Financial Product Or Services Development Indicators

Frequency of New Product and Service Launches:

- Definition: Actions the number of new financial service or products presented by the bank over a specific duration;

- Function: Mirrors the bank's ability to introduce and its responsiveness to market demands. To the research, the demand-driven variable plays a key role in stimulating innovation behavior (Buzzacchi, L., Colombo, M. G., & Mariotti, S., 1995). In the face of rapidly changing markets and deregulation, most commercial banks increasingly rely on new product development for growth and profitability (Alam, I., 2003).

Degree of Services And Product Innovation:

- Definition: Examines the level of technology in brand-new service or products based on their capability, style, user experience, and distinction from existing offerings;

- Objective: Establishes the originality and worth proposition of the brand-new offerings.

Consumer Contentment:

- Interpretation: Captures the general consumer responses and complete satisfaction with new product and services;

- Objective: Indicates whether the developments fulfill consumer needs and expectations.

Market Share:

- Meaning: Stands for the marketplace share recorded by new service or products;

- Purpose: Shows the competitive positioning and market acceptance of the technologies. In the less concentrated and less traditional banking system, higher market share is positively correlated with innovation (Arnaboldi, F., & Rossignoli, B., 2015).

- Technological Advancement Indicators

Fintech Financial investment:

- Interpretation: Steps the bank's investment in fintech, including R&D, tools, and talent purchase;

- Objective: Highlights the financial institution's dedication and financial backing for technological advancement.

Variety Of Fintech Professionals:

- Meaning: Counts the number of fintech experts and experts within the financial institution;

- Purpose: Works as a sign of the bank's capacity to drive and sustain technical innovation.

Digital Makeover Progression:

- Meaning: Examines the degree of digitalization in organization procedures, procedures, and client service, in addition to making use of big information, AI, blockchain, and other advanced innovations;

- Objective: Examines the bank's capacity to leverage innovation to boost efficiency and service high quality.

- Monitoring Innovation Indicators

Organizational Structure and Process Development:

- Definition: Takes a look at the bank's innovations in business framework, monitoring processes, and decision-making devices;

- Function: Reviews the financial institution's efforts to improve management efficiency and market responsiveness.

Risk Monitoring Technology:

- Interpretation: Examines the financial institution's cutting-edge strategies to take the chance of monitoring, consisting of making use of new innovations, techniques, and strategies in danger assessment, tracking, and reaction;

- Objective: Mirrors the bank's capability to handle and minimize risks effectively.

Company Society and Values Development:

- Meaning: Assesses the financial institution's efforts to foster an extra open, inclusive, and innovative business culture;

- Function: Indicates the bank's initiatives to produce a setting that encourages and supports advancement.

- Comprehensive Innovation Indicators

Honors and Acknowledgment:

- Interpretation: Tracks the awards and honors gotten by the bank for its innovative success;

- Function: Reflects the financial institution's innovation abilities and acknowledgment within the sector.

Sector Impact:

- Definition: Procedures the bank's standing and impact in the economic industry, including its payments to market criteria, collaboration, and assumed management;

- Objective: Shows the financial institution's role and influence fit the financial landscape.

The evaluation of an industrial financial institution's cutting-edge task is a facility and complex process. By using a mix of these vital indications, financial institutions can gain a thorough understanding of their innovation abilities and effectiveness. It is necessary to keep in mind that the priorities and techniques of various financial

institutions might differ, and therefore, the choice of ideal indications need to be tailored to each bank's details context. Additionally, as the monetary market and technology continue to evolve, the metrics and techniques for evaluating bank technology should additionally be regularly updated and fine-tuned to continue to be appropriate and efficient.

CHAPTER 2
ANALYSIS OF PROVIDING INNOVATIVE DEVELOPMENT
OF THE BANKING INDUSTRY ON THE EXAMPLE OF
SICHUAN XINWANG BANK

2.1 Technical and economic characteristics of Sichuan XinWang bank

Xinwang Bank, as one of the introducing internet-based electronic financial institutions in China, has a significant influence on the nation's financial industry. The history of the development and development of this financial institution is gotten in touch with a number of important events.

In June 2016, Xinwang Financial institution was authorized for establishment by the China Financial Regulatory Commission and formally opened in December 2016, signed up in the Chengdu. The establishment of Xinwang Bank was noted by the shift to an electronic economic climate, and it was among the very first electronic banks to operate a net platform.

During the 2010s, during the period of intensive advancement of digital money in China, Xinwang Financial institution proactively increased its on the internet presence and opened new digital networks throughout the country. The bank also supplied a vast array of financial services, concentrating on inclusive finance and serving the underbanked populations.

In the 2020s, Xinwang Financial institution remained to demonstrate consistent growth and became a leader in the electronic banking sector in China. The financial institution actively created its technological base, presenting ingenious options and giving customers with hassle-free digital services, consisting of internet banking and mobile applications.

In 2020, dealing with the difficulties of the COVID-19 pandemic, Xinwang Financial institution, like lots of other financial institutions, encountered serious problems and responded by offering financial support to consumers affected by the situation.

To date, Xinwang Financial institution has effectively browsed the challenges and demonstrated monetary stability. The financial institution is actively creating its technological infrastructure, offering modern digital solutions, and remains to lead the market of digital banking services in China. It has actually also taken significant steps in the direction of environmental sustainability, coming to be the first carbon- neutral bank in the country and concentrating on eco-friendly finance.

Table 2.1

Main characteristics of Xinwang Bank

Direction	Characteristic
Size and assets	Xinwang Financial institution is one of the introducing internet-based digital financial institutions in China, with a concentrate on inclusive financing and a significant development in assets for many years.
Market position	The bank holds an unique setting on the market by targeting internet- savvy individuals, personal economies, SMEs, and rural consumers, promoting economic success and social growth.
Ingenious drive	Xinwang Financial institution is devoted to technology, with a substantial number of patent applications and a concentrate on innovation to drive its services.
Financial stability	The bank shows sensible and stable operations, with a durable risk monitoring system and different economic signs satisfying regulatory needs.
Digital services	Xinwang Financial institution proactively develops its technical base, using modern digital services such as online and mobile financial to improve customer experience.
Technological innovations	The financial institution is at the center of embracing new innovations like AI, huge data, and cloud computer to improve its threat management and service effectiveness.
Inclusive finance	Xinwang Financial institution is devoted to comprehensive money, striving to serve the underbanked and supplying financial services to small businesses, new citizens, and backwoods.
Environmental responsibility	The financial institution has taken steps in the direction of environmental sustainability, coming to be the first carbon-neutral bank in China and focusing on eco-friendly money.
Management in electronic banking	Xinwang Financial institution remains to lead in the digital financial market, with a clear vision to end up being a "new generation of digital modern technology comprehensive financial institution."
Financial support	The financial institution has a strong investor base, consisting of well- known enterprises, offering financial support and sources for its procedures and growth.

Xinwang Financial institution attracts attention as a leader in China's digital financial market, marked by its considerable development in properties and a solid focus on comprehensive money. The financial institution has tactically positioned itself to deal with a wide array of clients, consisting of internet-savvy people, capitalisms, little and medium-sized businesses, and country neighborhoods, therefore adding to both financial prosperity and social development. At the core of its operations is a ruthless drive for technology, as shown by its comprehensive license profile and its aggressive adoption of advanced innovations like AI, large data, and cloud computer, which contribute in enhancing danger management and solution efficiency.

Xinwang Financial institution's dedication to monetary security is evident via its sensible functional methods and a robust risk administration structure, making sure that it satisfies all governing needs and keeps a healthy and balanced economic account. The financial institution's commitment to electronic services is mirrored in its active advancement of a contemporary technical facilities that sustains seamless online and mobile financial experiences, enhancing customer satisfaction and interaction.

In Addition, Xinwang Bank is devoted to serving the underbanked, supplying monetary services to small companies, brand-new residents, and backwoods, thus playing a vital role ahead of time financial incorporation. The bank has actually also taken considerable steps toward environmental sustainability, becoming the very first carbon-neutral bank in China and highlighting green finance initiatives. Its management in the digital financial market is supported by a strong shareholder base, that includes popular ventures, giving the essential financial backing and resources to move the bank's continued growth and development. Overall, Xinwang Bank stands for a design of how electronic advancement and social obligation can be incorporated to form the future of banking in China.

Table 2.2

Banking Operational Data

Year	Total Assets (billion)	Loans and Advances (billion)	Total Deposits (billion)	Operating Income (billion)	Net Profit (billion)
2017	163.2	101.34	34.89	35.86	-16.93
2018	361.57	257.16	136.38	133.5	36.84
2019	441.53	334.44	267.24	268.06	113.18
2020	405.61	307.41	212.29	235.66	70.6
2021	571.16	436.23	318.82	264.13	91.76
2022	848.2	630.11	485.47	364.45	68.05
2023	1029.34	753.37	594.77	548.89	101.05

From 2017 to 2023, Xinwang Bank's complete properties, lendings and advancements, and total down payments all show a substantial raising pattern. This growth trend shows the financial institution's active efforts to expand its company range, enhance its service abilities, and boost its market competition. Specifically in 2022 and 2023, the development of these signs is specifically fast, suggesting that the financial institution has made significant progress in drawing in customer deposits and increasing credit scores scale.

The development in operating revenue and internet earnings additionally reflects the improvement of Xinwang Financial institution's profitability. The transition from a loss-making placement in 2017 to a net revenue of over 10 billion yuan in 2023 shows the improvement in the bank's operational effectiveness and management capabilities. Specifically in 2023, the significant rise in net earnings may be associated with the bank's optimization of asset structure, enhancement in threat administration abilities, and the enhancement of the market atmosphere.

The development in total deposits is essential for the financial institution as it is just one of the main networks of financial institution financing. The rise in down payments can not just improve the financial institution's liquidity but likewise provide much more lending funds for the bank, thus sustaining the bank's credit history service and overall organization growth.

On The Whole, Xinwang Financial institution has accomplished stable developement in the past few years, with arise in asset range and earnings. This may be because of the financial institution's ongoing financial investment and initiatives in digital makeover, product technology, and risk control. However, with the

accumulation of market competitors and the unpredictability of the macroeconomic setting, Xinwang Financial institution still needs to continue to be vigilant in the future, remain to enhance threat management, enhance organization structure, and attain lasting advancement. At the sametime, the bank likewise requires to take note of changes in the macroeconomic atmosphere and regulatory policies to readjust its method flexibly and guarantee the sustainability of down payment development.

Table 2.3

Bank Risk Management Data

Year	Non-Performing Loan Ratio (%)	Provision Coverage Ratio (%)	Loan Provision Ratio (%)	Capital Adequacy Ratio (%)	Core Tier 1 Capital Adequacy Ratio (%)	Tier 1 Capital Adequacy Ratio (%)
2017	0.11	2390.35	2.66	19.48	18.3	18.3
2018	0.39	693.03	2.71	15.26	14.18	14.18
2019	0.6	525.24	3.16	18.26	17.2	17.2
2020	1.19	334.51	3.97	18.26	14.18	14.18
2021	1.05	345.14	3.64	15.26	14.18	14.18
2022	1.73	186.65	3.22	12.28	11.17	11.17
2023	1.71	194.63	3.33	11.54	10.45	10.45

From 2017 to 2023, Xinwang Bank's risk monitoring indications show some significant trends and adjustments. The non-performing lending ratio increased from 0.11% in 2017 to 1.71% in 2023, suggesting difficulties in possession quality and a rise in credit scores danger. The stipulation insurance coverage proportion reduced from 2390.35% in 2017 to 194.63% in 2023, mirroring a reduction in the buffer degree kept by the bank to deal with potential credit report losses. The funding provision proportion additionally revealed a decreasing trend, from 2.66% in 2017 to 3.33% in 2023, which may indicate that the financial institution is enhancing financing loss arrangements to manage the development in non-performing loans.

The resources adequacy ratio and relevant indications also reveal a down trend, from 19.48% in 2017 to 11.54% in 2023. This may suggest that the bank's capital barrier is lowering, calling for interest to its impact on the bank's stable procedures. These adjustments might be connected to the financial institution's fast organization

development, changes in the macroeconomic atmosphere, and increased governing demands.

Overall, Xinwang Bank faces certain stress in danger management, specifically in terms of property high quality and funding adequacy. The financial institution needs to take efficient measures, such as reinforcing credit scores threat administration, optimizing property framework, and enhancing funding levels, to ensure its long-lasting steady operation and lasting development. At the same time, the bank also needs to closely keep an eye on macroeconomic and sector patterns, and readjust danger monitoring methods in a prompt fashion to attend to possible market threats.

Table2.4

Bank Financial Indicators Data

Year	Total Assets (billion)	Total Liabilities (billion)	Shareholders' Equity (billion)	Operating Revenue (billion)	Operating Expenses (billion)	Operating Profit (billion)	Profit Before Tax (billion)	Net Profit (billion)	Return on Assets (ROA) (%)	Return on Equity (ROE) (%)	Book Value Per Share (yuan/share)	Earnings Per Share (yuan/share)
2017	163.2	135.17	28.04	35.86	58.38	-22.52	-22.54	-16.93	-1.75	-2.55	1.43	-0.17
2018	361.57	298.49	50.11	133.5	156.96	78.69	78.45	36.84	1.4	15.16	1.67	0.38
2019	441.53	355.5	50.11	268.06	170.61	93.51	92.84	70.6	1.88	17.05	1.92	0.31
2020	405.61	329.86	50.11	235.66	156.96	78.69	78.45	70.6	1.67	11.17	1.92	0.3
2021	571.16	463.48	64.34	264.13	170.61	81.06	80.67	70.6	1.88	14.56	1.92	0.3
2022	848.2	694.68	74.45	364.45	283.38	81.06	80.67	68.05	0.96	11.17	1.92	0.3
2023	1029.34	954.89	74.45	548.89	423.59	125.26	125.21	101.05	1.08	14.56	1.92	0.3

From 2017 to 2023, Xinwang Financial institution's total possessions and overall responsibilities have revealed a significant higher trend, indicating that the financial institution's scale is continuously increasing and its market impact is slowly enhancing. The complete assets expanded from 16.32 billion yuan in 2017 to 102.934 billion yuan in 2023, and the total responsibilities also enhanced from 13.517 billion yuan in 2017 to 95.489 billion yuan in 2023. This growth fad mirrors the bank's improved capability to manage properties and responsibilities, in addition to its boosted good looks to market funds.

Both operating earnings and web earnings have actually revealed a stable development pattern. Operating earnings expanded from 3.586 billion yuan in 2017 to 54.889 billion yuan in 2023, and web revenue boosted from -1.693 billion yuan in 2017 to 10.105 billion yuan in 2023. This development indicates that the bank's

profitability is continually strengthening, and its functional effectiveness and profit model are progressively growing.

The Return on Properties (ROA) and Return on Equity (ROE) have varied throughout this duration but normally stayed at a fairly stable degree. ROA and ROE are important indicators for measuring a bank's earnings and possession utilization effectiveness, and their stability indicates that the financial institution is concentrating on revenue high quality and risk control while pursuing development.

The modifications in book worth per share and revenues per share additionally mirror the development of the financial institution's earnings and investor worth.

Guide value per share boosted from 1.43 yuan in 2017 to 1.92 yuan in 2023, and incomes per share grew from -0.17 yuan in 2017 to 0.30 yuan in 2023. These boosts are a positive signal for shareholders, showing that the value of their investments is boosting.

In summary, Xinwang Bank has actually accomplished substantial growth in asset range, running earnings, net revenue, and various other areas over the past few years, while maintaining relatively steady profitability and property application efficiency. These achievements may be related to the financial institution's digital change, product innovation, improved danger control capacities, and adaptability to the marketplace atmosphere. In the future, the bank requires to remain to strengthen danger monitoring, optimize its asset-liability structure, and enhance service performance to manage prospective market obstacles and dangers.

The cost-to-income ratio is an important metric for assessing a financial institution's operational efficiency, mirroring the proportion of costs sustained by a financial institution to produce each unit of revenue. A reduced cost-to-income ratio signifies that the bank is handling its expenses better, bring about enhanced productivity.

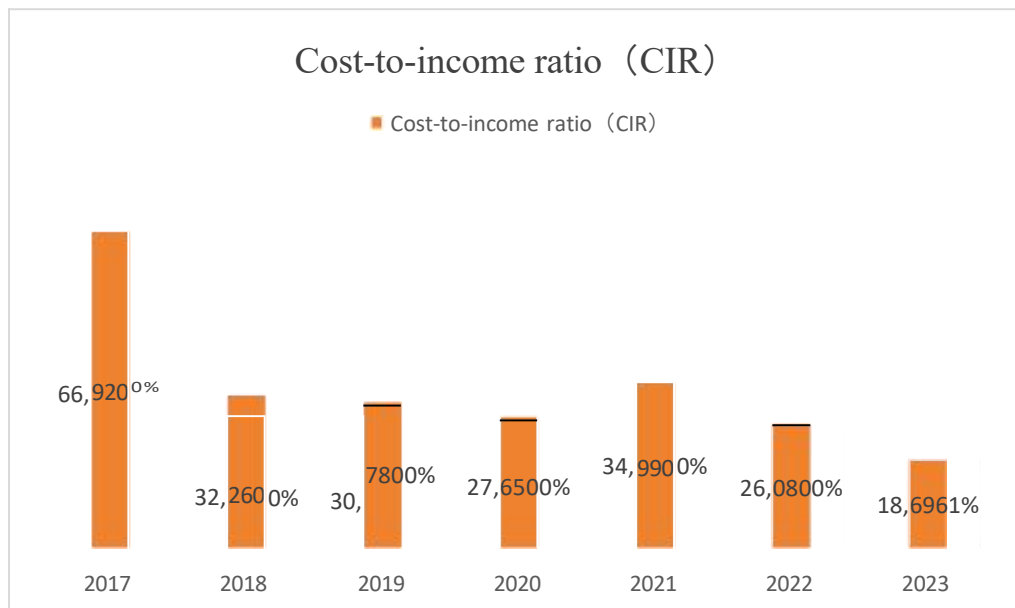


Fig 2.1 The cost-to-income ratio from 2017-2023 of Sichuan XinWang Bank ,%

According to the offered data, XinWang Financial institution has seen a remarkable down fad in its cost-to-income ratio from 2017 to 2023. This pattern highlights the bank's exceptional achievements in price control and functional effectiveness improvement. Particularly:

- Steady Decrease: The cost-to-income ratio decreased substantially from 66.92% in 2017 to 18.6961% in 2023, highlighting the financial institution's relentless initiatives and substantial outcomes in expense control;
- Secret Inflection Things: In 2018 and 2019, the cost-to-income ratio dropped to 32.26% and 30.78% respectively, noting important turning points in the financial institution's expense controll efforts. Although there were occasional changes afterwards, the total pattern remained down;
- Steady Low Levels: From 2020 to 2023, the cost-to-income ratio maintained relatively low degrees, showing the financial institution's stability and uniformity in expense control.

The significant decline in XinWang Financial institution's cost-to-income proportion can be attributed to the complying with initiatives:

- Internal Administration Optimization: The bank most likely strengthened its interior monitoring through refined monitoring practices and process optimization, causing decreased operational expenses;
- Technical Upgrades: With the advancement of fintech, the bank may have raised its innovation investments, leveraging electronic makeover to boost operational effectiveness and reduced labor prices;
- Business Framework Change: The financial institution might have adjusted its organization mix, minimizing high-cost, low-profit organizations and raising high- value, efficient businesses, therefore improving total productivity;
- Boosted Danger Monitoring: The bank most likely enhanced its threat management capabilities, lowering non-performing finance proportions and improving property quality via effective threat control and asset quality monitoring, consequently lowering risk expenses.

The decrease in XinWang Financial institution's cost-to-income proportion has had favorable effects:

- Improved Profitability: By producing the same income with lower expenses, the financial institution's success has raised;
- Enhanced Competitiveness: In the significantly competitive banking landscape, a reduced cost-to-income ratio positions XinWang Financial institution positively in rate competition and solution high quality, enhancing its market competition;
- Promoted Sustainable Growth: Reliable expense control gives a solid structure for the bank's sustainable development, allowing it to assign even more resources in the direction of innovation and development.

The asset turnover ratio (Possession Turn over Proportion) is a financial metric used to determine the performance of a company in generating sales revenue from its properties. It calculates the amount of sales earnings created per unit of assets, commonly making use of the formula of operating earnings divided by typical complete possessions.

When it comes to the partnership between the property turnover ratio and financial development, they are not straight relevant, however there can be an indirect connection via the operational version and service advancement of banks. As a banks, a bank's possessions generally include finances, protections, deposits, etc. Financial development frequently involves services and product innovation, such as developing new economic tools, giving extra efficient repayment services, and boosting risk monitoring innovations, all of which can enhance the functional efficiency and productivity of the bank.

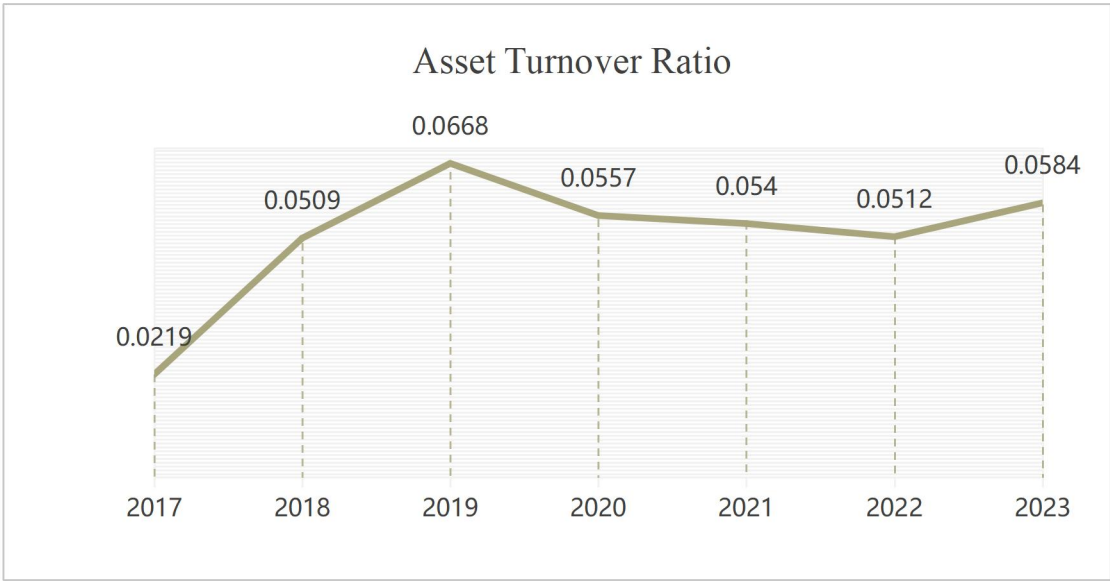


Fig 2.2 The asset turnover ratio from 2017-2023 of Sichuan XinWang Bank ,%

Based on the offered property turnover proportion information for Sichuan Xinwang Financial institution, we can perform the following evaluation:

- Enhancement in Possession Use Performance. From 2017 to 2019, the asset turnover rate raised from 0.0219 to 0.0668. This indicates that the financial institution improved its performance in using possessions throughout this duration, implying that for each and every unit of possession, even more sales revenue was generated. This could be due to more efficient asset management techniques or by expanding its consumer base and solution vary to boost income;
- Variations in Asset Application Performance. After reaching a peak in 2019, the property turn over rate lowered to 0.0557 in 2020 and 0.054 in 2021. Such decreases might have been affected by changes in the exterior atmosphere (such as

macroeconomic conditions, raised industry competitors, governing policy modifications) or the result of inner critical changes within the bank, such as boosted financial investment bring about a momentary rise in asset range without a symmetrical rise in earnings.

In 2022, the asset turnover price fell additionally to 0.0512 however recoiled to 0.0584 in 2023. This may mirror that after the modifications of the previous two years, the bank started to recover its possession use efficiency or embraced new strategies to boost the ratio of income about possessions.

Concerning banking technology, these data may suggest:

- **Application of Technological Innovation:** As a net financial institution, Sichuan Xinwang Financial institution most likely counts on technological development to lower costs and boost service efficiency, which helps improve the asset turn over rate. For instance, enhancing online solution systems to reduce purchase processing time and prices, consequently transforming possessions right into income faster;

- **Market Growth:** Xinwang Bank may have increased its revenue with broadening market protection, specifically prolonging solutions to third-tier and fourth-tier cities and rural areas where there is need for economic services, driving revenue development;

- **Threat Monitoring:** While maintaining a high possession turnover rate, the bank likewise requires to stabilize risk administration and development. A higher turn over rate might feature greater credit scores risks or various other operational dangers; therefore, the financial institution should guarantee that its threat administration framework is durable sufficient to deal with potential risks.

In recap, improvements in the asset turn over price are usually associated with the financial institution's initiatives in development targeted at enhancing revenue via much more effective solution delivery, far better customer experiences, and bigger market protection. Nevertheless, financial institutions also require to continually check possession high quality and risk to make certain lasting growth.

The financial efficiency of Sichuan Xinwang Bank from 2017 to 2023 completely shows its innovative abilities and growth capacity in the field of fintech. Through continuous R&D financial investment, optimization of service versions, and improvement of service efficiency, Xinwang Bank not only attained fast development in running earnings and web profit yet also offered more convenient and reliable monetary services to small and micro-enterprises and specific sellers. In the future, with the constant growth and popularization of fintech, Sichuan Xinwang Bank will continue to keep cutting-edge vitality and contribute even more to the premium growth of the real economy.

2.2 Analysis of the innovative activity of Sichuan XinWang Bank

As an arising personal bank, Sichuan XinWang Financial Institution has actually been at the forefront of economic modern technology (fintech) given that its inception. With a collection of ingenious tasks, the bank has actually achieved substantial improvements in the quality and efficiency of economic solutions, while likewise promoting financial proficiency and protecting customer civil liberties. This area will analyze XinWang Bank's cutting-edge tasks from multiple viewpoints, concentrating on digital finance, green financing, comprehensive financing, and financial education and learning and outreach.

Table 2.5

The Digital Financing Activity of Sichuan XinWang Bank

Time Period	Activity	Content
2016	Establishment of the Bank	XinWang Bank was founded, positioning itself as a digital-native bank dedicated to advancing digital inclusive finance through technological innovation.
2016-2023	Technology R&D and Patent Application	Developed and applied for over 530 patents, including numerous energy-saving and consumption-reducing technologies, to drive technological self-iteration.
2023	Digital Transformation Strategy Upgrading	Proposed a new direction for digital capabilities: "integration, intelligence, agility, and security," and comprehensively upgraded the digital operations strategy.

2023	Perfecting the Digital Operations System	Constructed a "three horizontal and four vertical" digital operations system and set the "119" digital capability construction goal.
2023	Intelligent Capacity Building	Leveraged the AI middleware system to deeply integrate intelligence into business operations and enterprise management, enhancing the quality and efficiency of financial services.
2023	Innovation in Inclusive Financial Products	Launched digital inclusive financial products such as "Good Person Loan" and "Good Business Loan" to serve new citizens, small and micro business owners, and individual industrial and commercial households.
2023	Industry Exchange and Sharing	Participated in the exchange of digital transformation achievements within the Sichuan banking industry, sharing experiences and best practices.

With a deep understanding and application of emerging technologies, XinWang Bank has actually effectively constructed a comprehensive digital environment that encompasses the entire spectrum of economic services, IT systems, and functional and risk regulation frameworks. By leveraging large data, cloud computing, and expert systems, the financial institution has actually developed a nimble IT system and an exact on-line internet real-time risk control system. This electronic change not only improves solution performance but likewise reduces functional expenses, offering more convenient and efficient monetary services to small and micro business and individual company owners.

Sichuan XinWang Financial institution has actually shown a strong dedication to environment-friendly financing, integrating environmental sustainability into its core business practices and contributing to the wider objectives of environmental activity and sustainable development. This section lays out the bank's essential activities and success in the field of environment-friendly finance.

Table 2.6

The Green Financing Activity of Sichuan XinWang Bank

Time Period	Activity	Main Results
2021 - Present	Continuous Release of Environmental Reports	Full disclosure of environmental impact information and related work results, enhancing transparency.

September 2022	Carbon Neutralization Action	Offset all carbon emissions generated by business activities through the purchase of carbon emission reductions from the "Carbon Hui Tianfu" mechanism in Chengdu, becoming the first legal banking institution in China to achieve comprehensive carbon neutrality in business activities.
Ongoing	Green Financial Product Innovation	Increased innovation and promotion of green financial products, with a focus on supporting energy conservation, environmental protection industries, and green, low-carbon consumption.
2022 and Beyond	Climate-Friendly Bank Construction	Introduced the concept of sustainable development, promoting the construction of a "climate-friendly bank" that covers climate corporate governance, climate risk management, climate investment and financing, and carbon footprint management.
2022	Collaboration with IFC	Launched the "Coordinated Development of Green and Inclusive Finance Project" in partnership with the International Finance Corporation (IFC), providing special financial support for micro, small, and medium-sized female-owned enterprises through digital credit technology, thereby promoting the popularization and deepening of green finance.
By End of 2023	Investment in Energy Conservation Technologies	Developed and applied for over 530 patents, including numerous technologies that contribute to energy saving and emission reduction. Additionally, implemented several cost-reduction and efficiency-improvement projects based on these technologies.
To Date	Digitalization for Low-Carbon Operations	Reduced carbon emissions through digital means, such as a fully online low-carbon operational model, resulting in a reduction of more than 1.2 million tons of carbon emissions.

Sichuan XinWang Bank's cutting-edge practices in eco-friendly finance have actually established a benchmark for the industry. By continuously launching environmental info, attaining carbon nonpartisanship, innovating eco-friendly economic items, and teaming up with worldwide organizations, the financial institution is not just reducing its very own environmental impact however likewise driving the more comprehensive adoption of lasting techniques. These initiatives

highlight XinWang Financial institution's dedication to being a leader in the environment-friendly financing market and its devotion to contributing to an extra sustainable future.

Table 2.7

The Inclusive Financing Activity of Sichuan XinWang Bank

Time Period	Activity	Content
2022 - Present	Promotion of Digital Inclusive Financial Products	Launched digital inclusive financial products such as "Good People Loan" and "Good Business Loan," primarily serving new citizens, small and micro business owners, and individual businesses.
2022	New Citizen Financial Services	Increased financial investment and the depth of products and services, providing warm, powerful, and sustainable digital inclusive services for new citizens who have "no savings in the past," "no income in the current period," "no collateral," and "restricted activities."
2023	Innovation in Inclusive Financial Products	Continued to optimize digital inclusive financial products, enhancing the coverage and accessibility of financial services through an online financial service model.
2023 - Present	Green and Inclusive Finance Coordinated Development Project	In collaboration with the World Bank Group's International Finance Corporation (IFC), launched a project to coordinate the development of green and inclusive finance, with a special focus on the financial needs of micro, small, and medium-sized women-owned enterprises. The project aims to enhance their ability to respond to climate change through innovative digital products and services.
In 2024	"Financial Standards for People and Enterprises" Theme Activity	Conducted online and offline publicity to popularize financial standards, focusing on the role of financial standards in inclusive finance and other fields, and improving the financial literacy of the public.

Sichuan XinWang Bank's campaigns in electronic economic addition show a commitment to breaking down barriers and prolonging economic solutions to underserved populaces. Through the introduction of easy to use digital financial products, enhanced services for new people, continual innovation, and partnerships with worldwide companies, the bank is making substantial strides in promoting financial addition. Additionally, by concentrating on financial education and recognition, XinWang Bank is promoting an extra monetarily literate and resistant society. These initiatives collectively contribute to an extra inclusive and lasting financial ecosystem.

Table 2.8

Innovation in Risk Managing Activity of Sichuan XinWang Bank

Time Period	Activity	Content	Main Results
2023	Construction of a Network Security	Submitted 13 cyber attack intelligence	Effectively supported the network security of the
	Situational Awareness Platform	reports to facilitate the prevention and investigation of network security risks in the financial industry.	financial industry and improved risk prevention capabilities.
2023 - Present	Technological Innovation Promotes Improvement in Risk Control Ability	Committed to technology, with the number of new applications ranking among the top global banks. Deeply mined data value through big data and artificial intelligence, achieving full-process data operation.	Improved the accuracy and timeliness of risk identification and reduced the non-performing loan ratio.
2024	Financial Education Publicity Month Activities	Held special seminars on financial consumer protection and community fun garden parties to enhance public awareness of risk prevention.	Enhanced citizens' awareness of financial security and jointly built a financial security defense line.

Ongoing	Construction of a Security and Anti-Fraud System	Built a big data system based on internet and modern financial institution data to establish a security and anti-fraud system.	Ensured real users, real devices, and real intentions, effectively preventing fraud risks.
Recent Years	Construction of a Digital Risk Control System	Used digital means to build a big data-enabled closed loop covering data collection, processing, and consumption for intelligent risk control.	Improved the efficiency of risk control and reduced operating costs.

Sichuan XinWang Financial institution's achievements in risk monitoring emphasize its commitment to leveraging innovative modern technologies and ingenious techniques to improve security and minimize financial threats. Through the growth of a network security situational understanding system, using huge information and AI for even more precise risk identification, and the implementation of a durable security and anti-fraud system, the bank has considerably strengthened its threat management framework. Additionally, by engaging in financial education and awareness projects, XinWang Bank is promoting an extra educated and safe financial environment for its consumers. These efforts jointly add to an extra durable and lasting financial ecosystem.

Sichuan XinWang Financial institution is dedicated to developing a strong brand name for the defense of monetary consumer legal rights and rate of interests. With a collection of well-structured and cutting-edge tasks, the financial institution aims to boost public economic literacy and threat prevention recognition. By leveraging both online and offline platforms, XinWang Bank has developed an identifiable and effective financial education matrix, contributing to a more enlightened and financially secure culture.

PEST Evaluation of Sichuan XinWang Bank's Ingenious Tasks.

Sichuan XinWang Financial Institution has been at the center of fintech advancement, and its activities can be analyzed with the Political, Economic, Sociocultural, and Technical (BUG) framework. This evaluation provides an extensive understanding of the outside factors that influence the financial institution's innovative efforts.

Political.

Plan Support and Regulation:

- Government Plans: As an exclusive bank, XinWang Financial institution gain from solid plan assistance. The Chinese federal government has regularly advertised fintech advancement, presenting plans to motivate banks to take on new technologies for better service high quality and performance;

- Regulatory Setting: Regulators are increasingly concentrated on making certain that fintech technologies comply with legal and regulatory frameworks. XinWang Financial institution must remain abreast of policy changes and guarantee that its technologies meet all regulative demands;

- Appropriate Regulations and Regulations: The rapid evolution offintech has resulted in the continuous improvement of pertinent regulations and regulations. XinWang Bank adheres to key regulations such as the Digital Trademark Law, Electronic Repayment Standards, and Online Banking Organization Monitoring Procedures to make sure compliance and authenticity in its operations.

Economic:

- Secure Development: China's consistent financial development provides a desirable setting for fintech advancement. XinWang Bank leverages advanced technologies like huge information, cloud computer, and artificial intelligence to enhance its services and products, thereby enhancing its market competition;

- Market Need;

- Customer Demands: With the acceleration of intake upgrades and electronic change, the need for varied and sophisticated monetary solutions is growing. XinWang Financial institution has reacted by introducing products such as "Great Business e-

Loan" and "Good Business Finance," which cater to the financing requirements of small and micro enterprises and specific organizations;

- Inclusive Financing: The financial institution likewise focuses on offering obtainable and efficient economic solutions to underserved sections of the populace, lining up with the wider objective of inclusive money.

Sociocultural. Social Cognition:

- Financial Literacy: As financial knowledge becomes much more prevalent and consumer financial literacy boosts, there is a growing approval and understanding offintech. XinWang Bank proactively carries out monetary education and learning campaigns, both online and offline, to boost public recognition and rely on fintech remedies;

- Cultural Shifts: The increasing digitalization of culture and the rising significance of convenience and access in economic solutions have driven the fostering of fintech. XinWang Financial institution's user-friendly and obtainable digital products align well with these cultural changes;

- Social Duty. Addition and Ease Of Access: XinWang Financial institution is devoted to meeting its social duties by attending to the monetary service demands of at risk groups and remote areas. The financial institution provides comprehensive economic product or services, making sure that these communities have access to practical and effective economic options.

Technological:

- Big Data and AI: XinWang Financial institution uses huge data and artificial intelligence to optimize the debt approval process, boosting both the effectiveness and precision of financing authorizations;

- Blockchain Technology: The financial institution uses blockchain technology to improve purchase transparency and security, ensuring robust and credible monetary operations.

Technical Collaboration. XinWang Financial institution teams up with modern technology firms, colleges, and research institutions to discover the frontiers of fintech. These partnerships allow the financial institution to integrate innovative

modern technologies and monitoring techniques, increasing its very own technology capabilities.

Sichuan XinWang Financial institution's ingenious tasks have attained substantial success across several measurements, including political, economic, sociocultural, and technical. The financial institution's dedication to leveraging cutting-edge modern technologies, sticking to regulatory standards, and meeting its social responsibilities settings it as a leader in the fintech sector. As the fintech landscape remains to advance and the plan atmosphere additionally optimizes, XinWang Bank is poised to enhance its advancement initiatives, grow the integration of fintech with the real economic situation, and make substantial contributions to financial and social advancement.

Evaluation of Sichuan XinWang Financial institution's ESG Efficiency.

Sichuan XinWang Financial institution has demonstrated a strong commitment to Environmental, Social, and Governance (ESG) principles via its cutting-edge tasks. This analysis examines the bank's ESG efficiency based upon the given information, focusing on how its campaigns lineup with ESG standards.

Environmental (E). Energy Intake Analysis

Total Trend: From 2017 to 2022 , XWBank's electrical energy intake has revealed a changing higher trend. Particularly, in 2017, the power intake was 1493.29 MWh, and there were changes in the complying with years, but given that 2020, it has seen substantial development, reaching 3812.12 MWh throughout the period from July 2021 to June 2022, suggesting a rise in energy demand due to business expansion.

Annual Changes:

In 2018, there was a sharp surge in electrical power intake, possibly due to fast service development or data center upgrades.

In 2019, electrical energy intake declined, which may show the performance of power performance renovation procedures.

Given that 2020, and especially during the second half of 2021 and the initial half of 2022, power intake increased again, significantly, which could be related to a rise in electronic solution needs and increased financial investment in technical advancement.

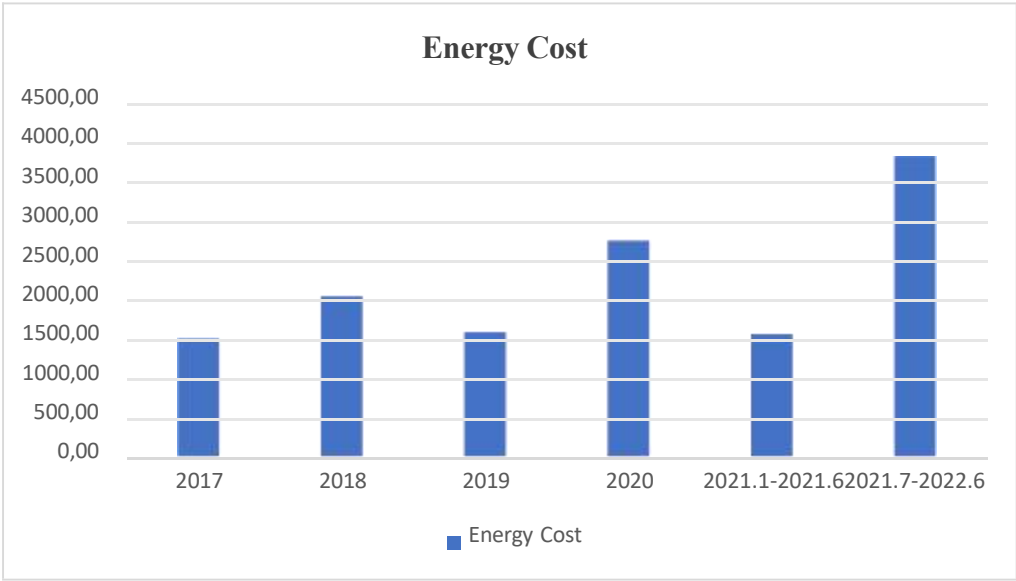


Fig 2.3 The energy cost from 2017-2022.6 of Sichuan XinWang Bank,MWh

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Efficiency Challenges and Opportunities: Dealing with the expanding power demand, XWBank needs to continually optimize its IT framework, adopt extra reliable power administration systems, and environment-friendly energy options, such as solar photovoltaic or pv panels and energy-efficient servers, to lower lasting operational costs and decrease environmental effect.

Complete Greenhouse Gas Emissions Analysis

Exhaust Patterns: Unlike the fluctuating electrical energy usage, the complete greenhouse gas exhausts of XWBank showed an instead intricate pattern over the observation period. Exhausts were high in 2017, after that went down substantially in the complying with years, but have actually increased once again because 2020. Significantly, the discharges in 2018 were unusually reduced, possibly due to modifications in statistical approaches or special occasions.

Reduction Accomplishments: Despite the changes, XWBank has actually accomplished particular success in reducing greenhouse gas exhausts overall. Compared with 2017, the emissions in subsequent years saw a significant decline, likely attributable to technical advancements, renovations in power efficiency, and potentially carbon offset jobs.

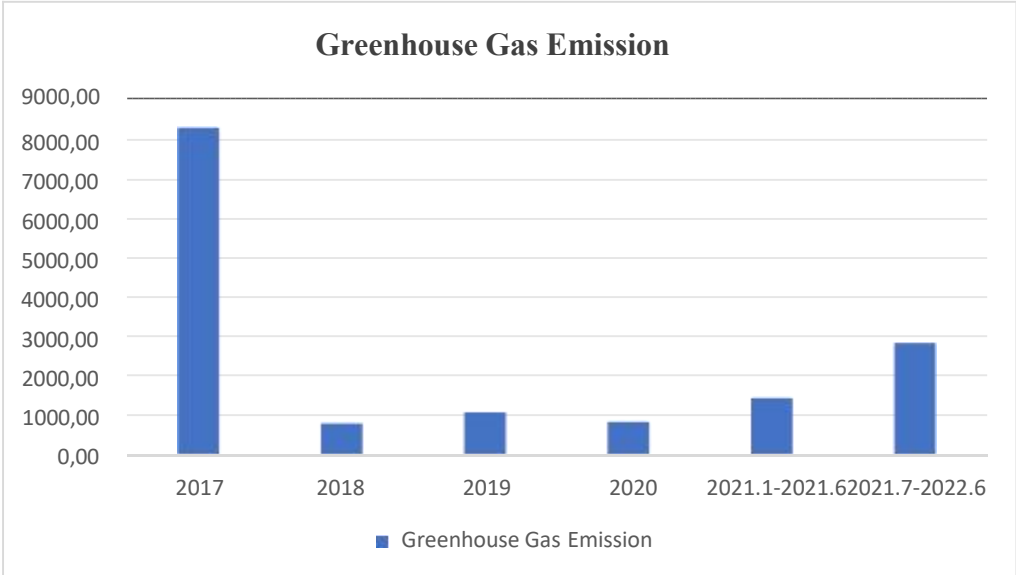


Fig 2.4 The greenhouse gas emission from 2017-2022.6 of Sichuan XinWang Bank, ton

Reduction Strategies: To additionally decrease greenhouse gas discharges, XWBank can remain to grow its method of environment-friendly credit report, sustaining low-carbon and environmentally friendly jobs; at the sametime, enhance interior energy-saving and emission-reduction monitoring, such as promoting remote working and optimizing the air conditioning system of data facilities, to decrease carbon exhausts during operations.

In recap, XWBank's efficiency on the Environmental (E) dimension is identified by a conjunction of increasing power consumption and varying greenhouse gas emissions. In the face of these obstacles, XWBank ought to remain to increase financial investment in enhancing energy performance and emission reduction technologies, enhance its energy mix, and proactively take on environment-friendly energy services to achieve even more sustainable advancement. At the sametime, it must boost cooperation with federal governments, sector associations, and ecological companies to collectively advertise the advancement of green money and a low-carbon economic climate.

Social (S).

Financial Education And Learning and Outreach:

- Financial Proficiency Programs: XinWang Bank's "Financial Education and learning Publicity Month" activities, including seminars and community occasions, aim to enlighten the public on economic customer protection and threat prevention. These efforts improve economic literacy, which is important for empowering individuals and communities to make educated monetary decisions;

- Inclusive Money: The bank's concentrate on giving available and reliable economic services to little and mini enterprises, specific companies, and vulnerable groups in remote areas aligns with the social goal of inclusive finance. Products like "Great Enterprise e-Loan" and "Good Service Lending" deal with the financing requirements of these segments, adding to financial incorporation and social stability;

- Community Involvement: XinWang Financial institution teams up with local companies and neighborhoods to organize enjoyable and educational events, such as the "Neighborhood Fun Yard Event." These tasks not just supply monetary education and learning however also promote a feeling of community and depend on.

Consumer Defense and Rights:

- Brand Name Structure for Consumer Civil liberties: The launch of the "Intend to Know" brand and engagement in financial consumer defense and service innovation activities demonstrate the bank's commitment to securing

consumer rights. These efforts consist of pre-protection measures and innovative means to promote monetary knowledge, making sure that consumers are well-informed and safeguarded;

- AI and Fraud Prevention: The implementation of AI fraud technology and robust protection systems gaurentees that just genuine customers access the bank's solutions, thus protecting customers from financial fraud and improving their count on the financial institution.

Governance (G). Governing Conformity and Threat Management:

- Policy and Governing Adherence: XinWang Financial institution operates within a rigid governing framework, sticking to national plans and regulations such as the Digital Signature Law, Electronic Settlement Guidelines, and Online Banking Business Management Actions. This guarantees that the financial institution's cutting-edge tasks are carried out in a legal and certified way;

- Risk Administration Systems: The financial institution has actually created innovative risk monitoring systems, including a Network Protection Situational Recognition System, a Digital Risk Control System, and a Security and Anti-Fraud System. These systems utilize huge information and expert system to recognize and minimize dangers, making sure the security and protection of monetary operations.

Technical Technology and Collaboration. Financial investment in R&D: XinWang Financial institution invests greatly in research and development to drive technical technology. This consists of using huge data, AI, and blockchain to maximize credit authorization processes, improve purchase openness, and improve overall service top quality.

Table 2.9

ESG Performance of Sichuan Xinwang Bank (2017-2022)

ESG Category	Indicator	Statistical Period	Data
Environmental (E)	Cumulative Digital Inclusive Finance Loans Issued (ten thousand loans)	2017-2021	16,570 ten thousand loans

Environmental (E)	Cumulative Digital Inclusive Finance Loans Issued (billion yuan)	2017-2021	631.2 billion yuan
Environmental (E)	Green Credit Balance (ten thousand yuan)	End of June 2021	18,069.67 ten thousand yuan
Environmental (E)	New Energy Vehicle Loan Balance (ten thousand yuan)	End of June 2021	17,756.61 ten thousand yuan
Environmental (E)	Green Finance Carbon Reduction (tons CO ₂ e)	End of June 2021	24,625.07 tons
Environmental (E)	Greenhouse Gas Emissions from Operating Activities (tons CO ₂ e)	End of June 2021	8,342.43 tons
Environmental (E)	Cumulative Carbon Reduction from Online Business (ten thousand tons CO ₂ e)	Since inception to end of June 2021	93.38 ten thousand tons
Social (S)	Number of Customers Served (ten thousand households)	End of 2022	Over 7,100 ten thousand households
Social (S)	Cumulative Online Inclusive Finance Loans Issued (ten thousand loans)	End of 2022	23,758 ten thousand loans
Social (S)	Number of Female Customers (ten thousand households)	End of December 2021	Over 2,006 ten thousand households
Social (S)	Female Customer Credit Approval Rate (%)	End of December 2021	63%
Social (S)	Female Customer Asset Overdue Rate (%)	End of December 2021	2.29%
Social (S)	Female Customer Asset Non-performing Loan Rate (%)	End of December 2021	0.95%
Governance (G)	Number of Employees with Labor Contracts	End of December 2021	680 people
Governance (G)	Proportion of Female Employees (%)	End of December 2021	36.62%
Governance (G)	Proportion of Female Employees in Middle and Senior Management (%)	End of December 2021	22.73%
Governance (G)	Social Insurance and Provident Fund Coverage Rate (%)	End of December 2021	100%

Based upon the offered information, Xinwang Financial institution of Sichuan demonstrates a solid commitment to Environmental, Social, and Governance (ESG) principles.

Environmental (E) Performance. Xinwang Bank has actually made substantial strides in advertising environmental sustainability via numerous efforts.

The bank has actually provided a collective overall of 16,570 million electronic inclusive money car loans from 2017 to 2021, amounting to 631.2 billion yuan. This shows a significant initiative towards financial incorporation that also supports lasting development.

By the end of June 2021, the eco-friendly credit report balance stood at 18,069.67 million yuan, showing the financial institution's financial investment in environmentally friendly jobs.

The bank has actually likewise supported new power lorry fostering with a financing balance of 17,756.61 million yuan by the end of June 2021.

The carbon decrease credited to green finance activities was 24,625.07 tons of CO2 equivalent since June 2021.

Regardless of operational greenhouse gas exhausts of 8,342.43 lots of CO2 matching, the bank has actually handled to accomplish a cumulative carbon decrease of 933,800 lots of CO2 matching with its on the internet organization procedures since its beginning as much as June 2021.

Social (S) Efficiency. The social measurement highlights the bank's initiatives in serving a broad consumer base and promoting sex equal rights.

By the end of 2022, Xinwang Financial institution had offered over 71 million households, showing a massive outreach program.

The issuance of advancing online comprehensive finance lendings got to 23,758 million by the end of 2022, additionally supporting monetary incorporation.

At the end of December 2021, more than 20,060,000 women consumers were served, standing for a significant portion of the client base.

The female client credit scores approval rate was 63%, showing that the bank is actively prolonging credit to women.

The possession overdue rate for women customers was 2.29%, and the non-performing loan rate was only 0.95%, recommending good financial health amongst this market.

Administration (G) Performance. In regards to governance, the financial institution shows audio techniques.

There were 680 staff members under labor contracts as of December 2021.

Women workers made up 36.62% of the labor force, showing a diverse work environment. Within center and elderly management, ladies accounted for 22.73%, showing soem level of sex variety in leadership functions. The social insurance and provident fund insurance coverage rate was 100%, making sure all staff members have access to these benifits.

Generally, Xinwang Financial institution's ESG performance reveals a positive approach to incorporating environmental sustainability, social obligation, and moral governance into its service design.

Sichuan XinWang Bank's ingenious tasks demonstrate a durable ESG performance. The bank's dedication to environmental sustainability with electronic transformation, its concentrate on social duty via economic education and learning and inclusive finance, and its strong governance techniques via governing conformity and progressed risk management systems all add to a favorable ESG influence. By remaining to focus on ESG principles, XinWang Bank is not only boosting its very own sustainability yet also making substantial payments to the wider financial and social development of the areas it serves.

2.3. Analysis of the effectiveness of financial innovations implemented in Sichuan XinWang Bank.

Introduction of Indicators to Determine the Effectiveness of Banks' Application of Development.

The performance of financial institution advancement can be evaluated through a multi-dimensional and thorough system that evaluates the inputs, results, and overall impact of cutting-edge tasks. This section lays out key signs for measuring the efficiency of advancement in financial institutions.

1) Development Input Indicators.

R & D (R&D) Expenditure:.

Definition: The amount of funds designated by the bank to scientific and technological research, development, and product innovation.

Importance: This statistics directly shows the financial institution's commitment and investment in cultivating development.

R&D Staff:.

Meaning: The percentage of R&D personnel within the overall workforce of the financial institution.

Relevance: This sign determines the human capital investment in innovation, highlighting the bank's commitment to constructing a skilled and ingenious team.

Infotech (IT) Investment:.

Definition: Investments in details systems, data analytics, expert system (AI) applications, and other technical infrastructure

Relevance: These financial investments are crucial for supporting contemporary financial technology, making it possible for a lot more reliable and reliable solutions.

2) Advancement Result Indicators.

Variety Of New Services And Product:.

Definition: The amount of new product or services introduced by the financial institution.

Significance: This statistics directly demonstrates the tangible end results of the bank's development efforts.

Patents and Intellectual Property (IP) Legal Rights:.

Meaning: The number of licenses, software copyrights, and and other IP rights obtained by the bank.

Relevance: These possessions are a strong indicator of the bank's technology capabilities and its ability to secure and market its developments.

Consumer Satisfaction:.

Interpretation: Feedback from customer satisfaction surveys regarding new products and services.

Relevance: High consumer satisfaction indicates that the financial institution's advancements are well-received and fulfill market demands, indirectly reflecting the success of the bank's development strategy.

3) Innovation Effectiveness Indicators.

Ratio of Intermediary Service Revenue:

Meaning: The percentage of revenue generated from intermediary business (e.g., fees, payments) relative to overall income.

Significance: A greater ratio suggests that the bank's ingenious organization designs are contributing dramatically to its total performance.

Cost-to-Income Ratio:.

Definition: The ratio of running prices to running revenue.

Importance: A reduced cost-to-income ratio indicates far better cost control and higher efficiency, recommending that the financial institution's developments are effectively decreasing functional costs.

Market Competitiveness:.

Interpretation: Improvement in market share, client growth price, and brand impact.

Importance: Boosted market competition is a direct procedure of the favorable effect of the financial institution's ingenious tasks on its market placement and long-lasting sustainability.

4) Various Other Comprehensive Indicators.

Advancement Setting Index:.

Interpretation: Includes the development culture, ambience, and reward devices within the financial institution.

Value: An encouraging and vibrant innovation setting is essential for fostering a society of continual enhancement and imagination.

ESG (Environmental, Social, and Governance) Efficiency:

Interpretation: The bank's focus on lasting growth, environmental management, social responsibility, and good administration during the advancement process.

Significance: ESG performance is significantly acknowledged as a crucial element of corporate responsibility and long-term worth production.

Key ESG indications include:

Ecological Indicators:

Carbon Exhaust Strength: Steps the carbon emissions from the financial institution's procedures and customer tasks, and the actions taken to lower them.

Power Intake: Concentrate On the energy use of bank branches and employees, urging the fostering of energy-efficient and environmentally friendly modern technologies.

Water Application Efficiency: Evaluates the bank's effectiveness in water usage and the execution of water-saving measures.

Environmental Threat Monitoring System: Assesses the bank's system for managing ecological dangers connected with consumers to stay clear of prospective losses.

Social Indicators:.

Employee Conveniences: Takes a look at the well-being, working conditions, and occupation advancement possibilities supplied to workers, along with worker contentment and loyalty.

Consumer Legal Right Protection: Assesses the bank's efficiency in protecting individual details and transparently revealing information about monetary products.

Social Work: Examines the financial institution's interaction in community services and its efforts to offer premium monetary services to local residents, advertising comprehensive finance.

Variety and Inclusiveness: Steps the bank's commitment to variety and inclusiveness in recruitment and promotion, ensuring a reasonable and equitable workplace.

Governance Indicators:.

Corporate Governance Framework: Evaluates the toughness and openness of the financial institution's governance framework, consisting of investor meetings, board of directors, and supervisory board.

Transparency of Info Disclosure: Evaluates the timeliness and precision of the financial institution's disclosures relating to financial status, business procedures, and danger management.

Interior Supervision: Analyzes the performance of the bank's inner audit and risk control systems.

Anti-Corruption and Anti-Money Laundering (AML): Examines the financial institution's devices for stopping corruption and cash laundering, consisting of team training and compliance recognition.

Compliance Operation: Guarantees that the financial institution and its clients run in conformity with regulations, preventing violations and connected dangers.

Arising ESG Indicators:.

Digital Growth Preparation Committee: The establishment of a committee or equivalent body to integrate electronic development into the business administration device.

Fintech Financial investment: The level of financial investment in fintech to drive development and improve services.

ESG Openness Examination: The construction of integrity analysis and penalty systems to enhance ESG transparency.

Verdict.

The effectiveness of a financial institution's advancement can be comprehensively measured using a set of related and corresponding indications. These include technology

input, result, and performance, along with broader ESG performance metrics. By embracing a balanced and alternative approach, banks can assess and adjust their development strategies to ensure they are aligned with both short-term goals and long-lasting sustainability.

Evaluation of the Performance of Innovation at Sichuan XinWang Bank

To validate the efficiency of developments implemented by Sichuan XinWang Financial institution, this study utilizes regression analysis to check out the connections between the number of license applications, the Fintech Development Index (FDI), the variety of technology workers, and the Digital Makeover Index (DTI) with per head revenue. The hypothesis is that a boost in the variety of license applications, a greater FDI, a raised variety of modern technology personnel, and a higher DTI would certainly cause an increase in per head profits, indicating a positive influence on functional efficiency and success.

Variable Meaning:

- Independent Variable (X1): Number of annual patent applications, reflecting the bank's level of technological innovation;
- Independent Variable (X2 FDI): Annual Fintech Advancement Index, which might reflect the degree of fintech innovation and application;
- Independent Variable (X3): Number of technology personnel, standing for the labor force took part in R&D within the establishment;
- Independent Variable (X4 DTI): Digital Change Index, determining the extent of the business's digital makeover;
- Reliant Variable (Y): Per head income, an essential sign for gauging the operational efficiency and profitability of the financial institution.

The dataset includes the adhering to monitorings:

Year	X1 (Patents)	X2 (FDI)	X3 (Tech Personnel)	X4(DTI)	Y (Per Capita Revenue)
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2017	25.00	43.89	182	58.03	137.91
2018	54.00	45.46	243	63.66	384.74
2019	60.00	47.18	304	65.63	617.66
2020	119.00	48.77	393	66.81	420.07
2021	162.00	52.74	476	68.81	388.43
2022	81.00	53.35	486	73.41	525.14
2023	37.00	56.22	526	73.57	729.92

Detailed stats for the variables are as adheres to:

Y (Per Capita Profits): Mean = 457.6957, Standard Deviation = 190.63151

X1 (Variety Of Patents): Mean = 76.86, Standard Deviation = 48.523

X2 (Fintech Growth Index): Mean = 49.6586, Standard Deviation = 4.54627.

X3 (Number of Innovation Worker): Mean = 372.86, Standard Deviation = 132.495

X4 (Digital Improvement Index): Mean = 67.1314, Standard Deviation = 5.49147.

Correlation Analysis. Connection coefficients amongst the variables indicate:.

A weak adverse relationship in between Y and and X1 (r = -0.045)

A strong favorable connection in between Y and X2 (r = 0.694)

A solid postive correlation between Y and X3 (r = 0.666)

A really strong positive connection between Y and X4 (r = 0.795)

A very high connection in between X2 and X3 (r = 0.979), recommending potential multicollinearity problems.

Regression Verson Spec. A multiple straight regression design is defined as:

$$Y = \beta_0 + \beta_1 * X_1 + \beta_2 * X_2 + \beta_3 * X_3 + \beta_4 * X_4 + \varepsilon$$

where β_0 is the intercept, β_1 , β_2 , β_3 , β_4 are the regression coefficients, and ε is the mistake term.

Model Estimation. The approximated coefficients from the regression version are:

$$\beta_1(X_1) = -1.079$$

$$\beta_2(X_2) = -16.374$$

$$\beta_3(X_3) = -0.144$$

$$\beta_4(X_4) = 46.574$$

Model Assessment.

R^2 : 0.742, suggesting that about 74.2% of the variation in Y is explained by the version.

F-statistic and P-value: $F = 1.435$, $P > 0.05$, suggesting that the overall design is not statistically considerable.

t-tests for specific coefficients:.

- X1: Not statistically substantial.
- X2: Not statistically significant.
- X3: Not statistically considerable.
- X4: Statistically significant ($P < 0.05$).

Analysis and Assessment of Innovation Effectiveness. Influence of Digital Transformation Index (X4):

- Positive Effect: The regression evaluation suggests a substantial positive result of the Digital Makeover Index on per head profits ($\beta_4 = 46.574$, $t = 0.875$, $P < 0.05$). This suggests that investments in electronic makeover add to greater per head earnings;

- Support from Connection: The positive correlation ($r = 0.795$) between Y and X4 further sustains this searching for.

Impact of Patent Applications (X1) and Innovation Personnel (X3):

- No Significant Influence: Neither the number of patent applications neither the variety of technology employees has a statistically substantial effect on per capita revenue;

- Correlation Insight: While there is a solid favorable connection ($r = 0.666$) between Y and X3, this relationship is not verified in the regression model.

Model Performance.

Benefits of Fit: The R^2 value of 0.742 shows a great fit of the version.

Statistical Significance: The absence of statistical relevance ($F = 1.435$, $P > 0.05$) suggests that the version does not completely capture the variability in per capita profits, possibly because of omitted variable bias or inadequate example dimension.

Evaluation of Advancement Efficiency:

- Partial Success: The results suggest that innovations in fintech (X2) and electronic transformation (X4) have worked in enhancing per head revenue;
- Required for More Optimization: The insignificant effect of license applications (X1) and technology employees (X3) on per capita earnings suggests that these locations may require additional examination or alternate methods;
- Multicollinearity Problems: The high correlation in between X2 and X3 ($r = 0.979$) suggests prospective multicollinearity, which may influence the stability of the regression coefficients. Addressing this issue via variable selection or other approaches is suggested.

In recap, the present analysis supplies evidence that Sichuan XinWang Bank's advancements in fintech and digital improvement are effective in enhancing per head earnings. However, the efficiency of various other forms of technology, such as patent activities and staffing of technology workers, continues to be vague and warrants better exploration.

CHAPTER 3
WAYS OF DEVELOPING INNOVATIVE STRATEGIES
IN COMMERCIAL BANK

3.1 Foreign and domestic experience of ensuring the effectiveness of innovative activities of the bank

The change to environment-friendly financing has come to be an important instructions for innovation in international banking.

ING Financial institution has actually made substantial financial investments and innovations in the field of environment-friendly money. The financial institution not only developed a specialized eco-friendly financing team yet also developed a clear green money technique focused on advertising international eco-friendly financial development via ingenious services and products. ING Financial institution provides financing assistance for renewable energy jobs, eco-friendly structures, lasting farming, and actively participates in the issuance of green bonds, providing environment-friendly investment options to capitalists.

HSBC has additionally accomplished exceptional cause its green finance transformation. The bank established a specialized division for green monetary items responsible for introducing green monetary products and services. HSBC provides financing assistance for tidy power, environment-friendly transport, sustainable agriculture, and proactively joins the construction of the worldwide green bond market, offering varied environment-friendly investment selections to investors. Additionally, HSBC improves the performance and comfort of eco-friendly monetary solutions via fintech, providing consumers with a far better experience in environment-friendly finance.

BNP Paribas has likewise executed excellently in the field of environment-friendly finance. The financial institution is committed to introducing environment-friendly

economic services and products, providing financing support for renewable resource projects, green buildings, sustainable farming worldwide. BNP Paribas also proactively joins the building of the international eco-friendly bond market, using rich green financial investment alternatives to capitalists. Furthermore, the financial institution boosts the intelligence and personalization levels of eco-friendly economic services with fintech, fulfilling the diverse demands of consumers.

Credit Suisse has made favorable progression in its green financing makeover. The bank developed a committed green financing division in charge of introducing green monetary services and products. Credit rating Suisse provides financing support for tidy power, eco-friendly transport, sustainable agriculture, and proactively participates in the issuance of eco-friendly bonds and funds, using diversified eco-friendly investment choices to capitalists. In addition, the financial institution boosts the openness and traceability of eco-friendly monetary services with fintech, improving capitalist self-confidence.

Financial institution of America has additionally invested positively and innovatively in the field of environment-friendly financing. The financial institution is committed to innovating environment-friendly economic product or services, providing financing assistance for renewable resource jobs, green structures, environmental innovation worldwide. Financial institution of America additionally takes part in the construction of the global eco-friendly bond market, offering rich green financial investment choices to financiers. Furthermore, the bank improves the comfort and effectiveness of environment-friendly economic services with fintech, giving clients with a much better experience in green finance.

Digital change is one more major pattern in the advancement of global financial.

Citibank has constantly been at the forefront of digital transformation. The bank has maximized company procedures comprehensively by presenting advanced innovations such as expert system and big information, improving operational performance and solution quality. Citibank's mobile banking application provides rich online economic services consisting of account questions, fund transfers, financial investment management, etc, enabling consumers to operate anytime, anywhere via

their mobile phones. In addition, Citibank uses big data to examine customer behavior, supplying tailored economic product or services, raising customer contentment and commitment.

HSBC has also accomplished significant cause electronic change. The financial institution has actually built a merged worldwide internet banking platform, attaining central administration of international accounts and seamless cross-border monetary services. Clients can conveniently manage global accounts, carry out cross-border transfers, and conduct fx purchases through HSBC's online banking platform. Furthermore, HSBC makes use of expert system and artificial intelligence modern technology to keep an eye on and caution against risks in real-time, boosting the precision and efficiency of risk administration.

JPMorgan Chase has also performed excellently in electronic makeover. The financial institution has advertised innovation in monetary products and services by introducing sophisticated innovations such as cloud computer and blockchain. For example, JPMorgan Chase used blockchain modern technology to develop a profession financing risk control system, achieving details sharing, transaction dependability, and risk controllability. In addition, the financial institution launched smart investment advising services, using large data and AI to provide customized financial investment suggestions and property allowance services to consumers.

Credit Suisse has also made favorable progression in electronic transformaton. The financial institution constructed a smart wide range management platform offering extensive wealth monitoring solutions to consumers. This platform makes use of huge data and AI to evaluate clients' economic standing and financial investment preferences, giving customized investment suggestions and asset allowance remedies. In Addition, Credit rating Suisse boosted the performance and convenience of customer care through electronic means, such as on the internet client service and smart customer care.

Deutsche Bank has actually also carried out active expeditions in digital change. The bank has actually enhanced service procedures thoroughly by presenting expert system and artificial intelligence technologies, enhancing functional performance and threat management capacities. As an example, Deutsche Bank built a danger

surveillance and very early caution system making use of AI technology to keep track of prospective risks in real-time. In addition, the financial institution released electronic financial services such as online account opening and online wealth monitoring, offering consumers with more convenient and reliable monetary services.

In the process of development, global banking focuses on risk management.

Citibank introduced AI innovation and developed a system called "Danger Instinct." This system utilizes machine learning formulas and huge information analysis to anticipate threats and check the bank's threat administration scenario. The introduction of this new technology aids Citibank determine potential dangers and boost threat management approaches quickly, making certain the secure operation of the financial institution.

JPMorgan Chase developed the Risk Matrix System, a significant agent of the brand-new approach Value in danger (VaR) for measuring market risk. The system measures the maximum feasible loss that an investment profile might experience within a reassured degree and timespan, helping JPMorgan handle market danger better.

Credit Suisse, in the process of economic technology, concentrates not only on typical types of threats such as market risk and debt threat yet also enhances monitoring and management of various other kinds of risks such as functional threat and liquidity threat. The financial institution developed a complete threat monitoring system, consisting of risk assessment, threat monitoring, and risk feedback, making certain that different dangers can be recognized and responded to timely during the process of financial innovation.

Barclays Financial institution embraces the risk-adjusted resources gains approach (RAROC) to review the risk and returns of company. This technique contrasts returns with possible losses to measure the overall advantage of business. By using RAROC, Barclays can a lot more precisely assess the risk degree of organization, hence making better decisions.

DBS Bank implements strict risk limitation monitoring throughout financial development. The bank sets threat limits based upon service kind, risk exposure, and so on, and checks the threat level of company in real-time. As soon as business risk

surpasses the limit, the financial institution will quickly interfere to guarantee timely threat control.

In the process of economic development, international financial concentrates on meeting customer and market demands. Citibank focuses its financial innovation around client requirements. Through its mobile application "Citi Mobile," it provides countless hassle-free financial solutions. The application sustains basic features like account questions, fund transfer, and integrates AI modern technology to provide smart customer service and tailored referrals. This innovation not only meets the modern need for ease in monetary services yet additionally shows Citi's keen insight right into market trends, thereby winning the favor of more customers.

HSBC's "HSBCnet" electronic banking service platform is one of the significant accomplishments of its economic innovation. This system integrates HSBC's worldwide network and IT sources, supplying one-stop international treasury administration services to business clients. Customers can view firm accounts, take care of abroad remittances, manage worldwide trade, and so on, at any time, substantially improving work efficiency. This innovative service not just meets the global financial service requirements of international enterprises however also settles HSBC's leading placement in the worldwide monetary market.

Commerzbank's collaboration with Alipay to launch settlement and settlement services is a highlight of its economic development. By incorporating bank accounts and Alipay accounts, this service attains automated settlement and transfer features, providing fantastic benefit to individuals. This technology not only meets the demand for hassle-free payment and negotiation however likewise lines up with the development fads of mobile settlement and e-commerce, gaining Commerzbank a bigger market share.

Standard Chartered Financial institution has introduced numerous services and products targeting SMEs, such as SME car loans and supply chain funding, during its economic technology initiatives. These innovative product or services goal to solve the problems of tough and pricey financing for SMEs, providing them with even more funding choices. Standard Chartered's technology not just satisfies the immediate

monetary solution demands of SMEs but likewise promotes the advancement of worldwide SMEs, infusing brand-new momentum into worldwide financial development.

Credit Suisse has actually introduced numerous innovative products and services in the field of wide range monitoring, such as personalized financial investment profile management and smart riches administration. These cutting-edge services and products aim to offer customized wealth monitoring services to assist customers preserve and enhance their wide range. Credit Suisse's innovation not just meets the need for top notch wide range administration solutions but also boosts its competitiveness in the global wealth monitoring market.

In the process of financial advancement, global financial focuses on leveraging technical means to boost service efficiency and top quality.

HSBC has actually made considerable financial investments and innovations in fintech. The financial institution builds advanced digital systems giving comprehensive electronic banking services, making it possible for clients to comfortably do purchases, repayments, financial investments, and riches monitoring. Furthermore, HSBC makes use of AI and huge data modern technology to improve the intelligence degree of threat monitoring and customer care. For instance, HSBC uses AI innovation to keep track of and assess consumer deals in real-time, effectively preventing scams and cash laundering while offering even more tailored and exact monetary services to customers.

Citibank's development in fintech is similarly extensive. The financial institution attains the full onlineization of banking service through digital change, giving consumers with easier and reliable monetary services. In addition, Citibank proactively applies blockchain technology to improve the performance of cross-border settlements and financing. The blockchain-based cross-border repayment platform established by the bank can accomplish real-time transactions and low-cost transfers, dramatically enhancing the effectiveness and safety and security of cross-border financial solutions. At the same time, Citibank utilizes AI innovation to maximize customer service and service processes, enhancing customer satisfaction and loyalty.

DBS Financial institution has done well in fintech. The financial institution builds an intelligent financial community accomplishing the extensive intelligence and digitization of banking service. For instance, the bank established an intelligent investment advisory platform that can supply individualized financial investment guidance and asset appropriation options based upon consumers' investment preferences and take the chance of tolerance. Furthermore, DBS Bank uses huge information and AI innovation to boost the effectiveness of threat administration and finance approval. By evaluating customers' transaction data and credit rating documents, the financial institution can promptly and precisely evaluate consumers' credit rating condition and payment capacity, therefore supplying easier funding services to clients.

Debt Suisse's advancement in fintech mostly concentrates on wide range administration and asset administration. The bank develops an innovative electronic riches administration system offering comprehensive on the internet wealth monitoring services to clients. This platform can update customers' property standing and financial investment portfolio efficiency in real-time, offering individualized financial investment advice and property allowance options. Furthermore, Credit history Suisse makes use of AI innovation to optimize client service and organization processes. For instance, the financial institution makes use of AI modern technology to intelligently evaluate and respond to customer questions, improving the efficiency and fulfillment of customer service.

Plan support gives a solid warranty for innovation in residential financial.

As the major regulatory body of residential financial, CBIRC has released a series of policies over the last few years to guide financial institutions to boost support for advancement. For instance, CBIRC encourages banks to innovate monetary product or services to meet the diverse monetary demands of the real economic situation. At the same time, CBIRC enhances supervision and guidance of cutting-edge business in the banking industry, guaranteeing that technology activities proceed on a compliant and sound track. The execution of these plans supplies a strong institutional warranty and regulative support for innovation in domestic financial.

As the formulator and implementer of monetary plan, the central bank's plan changes have had a favorable effect on banking advancement. For instance, to reduce corporate funding expenses, the central bank took measures such as reducing the book requirement ratio and minimizing the Finance Prime Rate (LPR). These policies not just promoted the growth and advancement of banking business but likewise improved the efficiency and quality of economic services. At the same time, the reserve bank urges financial institutions to utilize fintech to improve the intelligence level of economic solutions, offering clients with easier and effective monetary solutions.

Along with plan assistance at the main degree, local governments have likewise actively provided ingenious assistance policies to advertise the ingenious growth of regional banking financial institutions. As an example, some local governments have actually established innovation funds or risk compensation funds, giving certain financial backing and threat settlement for innovative business of banking banks. Additionally, local governments boost the business setting and enhance facilities building and construction through various procedures, supplying a good external atmosphere and conditions for banking advancement.

Considerable accomplishments have actually also been made in the field of eco-friendly money in residential financial.

Industrial Bank, as a pioneer in domestic eco-friendly finance, remains to boost the critical relevance of environment-friendly money, concentrating on crucial areas such as carbon reduction, contamination decrease, eco-friendly development, and financial development. The bank introduces environment-friendly economic products and services, such as carbon discharge reduction-linked car loans and environment-friendly bonds, giving significant financing assistance for the low-carbon shift of high-carbon sectors like petrochemicals and steel. Furthermore, Industrial Financial institution actively joins the building of the nationwide carbon market, advertising the deep combination of green financing and industry, demonstrating its management and development capabilities in the field of environment-friendly finance.

China Merchants Bank has additionally attained exceptional lead to the field of green finance, specifically in the securitization of environment-friendly credit report

possessions. The bank innovatively released multiple collection of vehicle installation financing green asset-backed safeties, where the underlying properties were all lendings for brand-new power cars, promoting the promotion and use new energy automobiles. This initiative not just helped improve the term inequality condition of business financial institutions' annual report yet additionally maximized the funding framework of the green financial market, providing chances for even more social capital to buy green properties.

The Jiangsu Rural Commercial Financial institution System has also made favorable progression in green finance. The system reacted positively to the national environment-friendly advancement technique, building a green financial company, item, and service system. By innovatively promoting several environment-friendly credit rating products such as "Environment-friendly Agriculture Loan" and "Green Rural Finance," it provided strong support for eco-friendly jobs and energy-saving and discharge reduction fields. At the same time, the system explored making use of technical ways to boost green monetary administration, achieving features such as eco-friendly intelligent identification and ecological benefit computation, advertising quick growth in eco-friendly money.

Substantial development has actually likewise been made in residential financial in regards to electronic transformation.

China Building Financial institution has actually built a large data real-time computer platform as an important component of independently manageable monetary digital framework. The platform embraces a cloud-native design, giving safe, practical, and extensive real-time application support capacities, substantially minimizing the construction cycle and price of real-time applications. This cutting-edge step not just improved the real-time service abilities of China Building and construction Financial institution however also laid a solid structure for its electronic makeover.

Hengfeng Bank created and created the unified website for all financial institution data sources, "DingDang" platform, aiding customers swiftly accessibility needed data resources. The core code of this platform is totally self-developed, with total copyright civil liberties, covering exterior data, data governance, data security, and various other

sections. At the same time, Hengfeng Financial institution created a digital makeover examination system, quantifying ratings from 6 capability domain names, clinically measuring the electronic capability degree of the entire financial institution, giving strong assistance for comprehensive electronic improvement.

The Sichuan branch of the Industrial and Commercial Financial institution of China accepted the State Taxation Bureau of Sichuan Province to innovatively release the "Tax obligation Financing" solution, utilizing huge data innovation to respond efficiently to the funding demands of small and micro-enterprises. This service introduces multi-dimensional data such as tax obligation and financial data to build models for consumer testing, amount computation, and threat surveillance, providing online credit report financing services to micro-enterprises, successfully boosting the access, ease, and accuracy of comprehensive economic services.

The Sichuan branch of the Agricultural Bank of China applied a "data-driven + ecosystem-driven" comprehensive economic technique, strengthening cross-domain data sharing, constructing a specialist data analyst group, and building an incorporated information evaluation and application platform. Through these steps, the Agricultural Financial institution of China enhanced the performance and quality of electronic inclusive financial services, giving easier and reliable monetary solutions to small and micro-enterprises and farmers.

Mianyang City Commercial Bank concentrated on improving supply chain financial solution capacities, taking on arising modern technologies such as distributed style and big data, promoting the construction of cash administration platforms, costs pools, and supply chain economic systems. The establishment of these platforms achieved the digital and smart change and upgrading of supply chain financial solutions, enhancing the efficiency and quality of financial services, providing more convenient and efficient funding assistance to small and medium-sized business.

In the process of financial development, domestic financial focuses on meeting customer and market demands.

WeBank, as the initial privately-owned financial institution and digital financial institution in China, fully uses digital modern technology indicates for small and

medium-sized ingenious modern technology enterprises defined by light properties and hefty r & d. By introducing multi-source data, WeBank supplies online, mortgage-free, easy-to-operate, higher-quota innovation car loans to business. This innovative effort properly addresses one of the most critical financing needs of enterprises throughout their start-up and development stages. Since completion of June 2024, WeBank's tech finance organization had actually been conducted in several provinces, towns, and prefecture-level cities throughout the nation, drawing in over 500,000 technology ventures to apply, accounting for 20% of the overall number of technology business across the country, cumulatively granting over 310 billion yuan in credit rating. Additionally, WeBank released "Digital Equity capital" services and the WeVenture sytem, satisfying the diverse financing demands of business, offering thorough digital services throughout their life process.

Postal Savings Bank of China concentrates on constructing set apart competitive advantages in economic innovation to meet the financial requirements of the real economy. The bank integrated innovation financing, green financing, inclusive finance, pension money, and digital finance into its mid-to-long-term strategic planning and enhanced source allocation. In comprehensive finance, Postal Savings Bank enhanced the top quality of financial services for "farming, backwoods, and farmers" and small and micro-enterprises. Since the end of September 2024, the balance of agricultural-related car loans got to 2.22 trillion yuan, and the balance of inclusive micro-enterprise car loans reached 1.58 trillion yuan. At the same time, Postal Savings Bank improved the modern technology financing environment, serving over 87,000 innovation ventures, with a funding equilibrium going beyond 480 billion yuan, an increase of over 40% year-on-year. These cutting-edge campaigns properly enhanced the coverage and ease of access of monetary services, satisfying the economic requirements of various consumer groups.

Huishang Financial institution discovered brand-new courses in technology financing throughout the process of economic development, promoting the virtuous cycle of "technology-industry-finance." The financial institution established a modern technology finance working team and a first-level innovation financing department,

setting up innovation financing facilities and specialized branches in multiple cities. At the same time, Huishang Financial institution offered extensive financial service requirements for the whole life process of innovation enterprises, including credit rating, warranty, and investment-linked financings. Furthermore, Huishang Bank collaborated with several investment organizations and warranty establishments, deepening "batch-linked investment and financing" solutions, giving "equity + loaning" linked support to innovation business. These cutting-edge initiatives effectively promoted the deep assimilation of technology and financing, satisfying the one-stop, varied, and extensive monetary solution demands of modern technology enterprises.

In the process of financial development, domestic financial concentrates on leveraging technical means to enhance solution effectiveness and top quality.

WeBank targeted the funding demands of little and medium-sized cutting-edge innovation business, innovatively launching a full life cycle electronic service. By presenting multi-source information and combining it with huge data threat control modern technology, WeBank achieved specific profiling and fast authorizations for modern technology business, substantially improving funding performance. At the same time, its "Digital Equity capital" solution and WeVenture platform provided varied funding channels for modern technology business, better meeting their funding requirements and effectively dealing with the issue of challenging and expensive funding faced by innovation business under traditional funding methods.

The six major state-owned banks have provided solid support for constructing a reliable solution system via cutting-edge techniques in the field of fintech. Taking the Industrial and Commercial Bank of China as an example, the financial institution enhanced the D-ICBC digital ICBC environment by introducing developments such as smart cashier machines and wise customer service, attaining automation and intelligence in company handling. These cutting-edge services not only significantly enhanced organization processing speed, lowered operating costs, however likewise considerably enhanced customer experience, allowing consumers to enjoy easier and effective economic services.

As the fintech subsidiary of the Financial institution of China, BOC Financial Innovation has actually offered strong support to small and medium-sized ventures with innovative fintech services. Its launched "BOC Intelligent Industrial Park Service Platform" integrates sources from government, ventures, financial institutions, etc, supplying extensive services including financing, consulting, training, and so on, to little and medium-sized ventures. This innovative system not only enhanced the comfort of SME funding yet also advertised the virtuous cycle of "technology-industry-finance," injecting new vigor right into the growth of SMEs.

Huishang Bank's ingenious practices in the field of innovation financing additionally reflect the principle of advancement boosting service quality and performance. The financial institution strengthened the business warranty of modern technology finance by developing an innovation money working team and establishing a first-level technology finance division. By matching information with the provincial integrated monetary service platform and collaborating with financial investment establishments, Huishang Bank strengthened "batch-linked investment and lending" services, giving more exact and effective financial services to innovation ventures. These innovative efforts not only improved service performance yet additionally enhanced the importance and efficiency of services.

Above all, the worldwide and domestic financial fields' advancements in eco-friendly finance and electronic makeover, with a concentrate on innovative financial products, services, and technical integration to improve functional performance and satisfy customer needs. International banks are leading in green money, using ingenious product or services to support renewable resource and sustainable jobs, while additionally embracing digital innovations like AI and blockchain to improve operational performance and risk monitoring. Locally, Chinese financial institutions are sustained by regulative plans that urge development, with a focus on eco-friendly financing and electronic systems to boost real-time company capacities and satisfy the evolving needs of consumers, particularly in the areas of technology money and inclusive solutions for agriculture and small businesses.

3.2 Selection of priority areas of innovative development of credit organizations

The choice of concern locations for the ingenious advancement of credit history companies is a facility yet vital concern, including numerous factors to consider such as market need, plan support, danger control, and technological innovation. Below are some pointers for prioritizing these areas.

Combination of Policy Support and Market Need:

- Strategic Arising Industries. Strategic emerging industries function as new engines for national economic advancement and crucial affordable industries for the future. These sectors generally include high-tech material, high included value, and strong market significance, substantially driving economic growth. By increasing support for calculated arising markets, credit history companies cannot only promote their rapid development yet likewise enhance their credit property structure and improve success. In addition, the successful growth of these markets can stimulate related supply chains, producing a favorable comments loop that additionally broadens the business range and revenue resources for credit scores organizations;

- Small and Micro Enterprises (SMEs). SMEs are an important part of the marketplace economic situation, characterized by lots, vast distribution, and solid development vigor. However, because of their smaller sized range and frequently insufficient credit history records, they frequently battle to protect financing from typical financial institutions. Credit rating companies can relieve the difficulties and high prices related to SME financing via the innovation of credit items and the optimization of debt processes. This not only aids in the development and development of SMEs yet likewise adds to enhanced employment, tax incomes, and general economic development, achieving a win-win situation for both social and financial benefits;

- Farming, Backwoods, and Farmers (the "3 Rurals"). The concerns concerning agriculture, backwoods, and farmers are essential to nationwide protection and social security. Credit companies can significantly add to the development of the

country economic situation by introducing in rural financial services, thus boosting the ease of access and availability of these services. Efforts such as the promotion of a one-card system for tiny farmer financings can streamline loan treatments and boost efficiency, while the "insurance + cooperative + debt" model can decrease finance dangers and reinforce payment abilities. Such steps aid to boost farmers' efficiency, increase farming performance, and foster the prosperity of the country economy and the enhancement of farmers' living standards.

Instances of Policy Assistance and Market Demand Assimilation Driving Credit Score Company Advancement.

Strategic Arising Industries.

Electric Vehicles (EVs) and Renewable Resource:

- Policy Support: Federal governments all over the world, including China, offer subsidies for EV acquisitions, tax obligation credit histories, and incentives for the installation of billing infrastructure. In China, the New Power Automobile (NEV) mandate calls for automakers to create a particular portion of NEVs;

- Market Demand: There is a growing consumer and corporate need for electric automobiles and renewable resource options, driven by ecological worries and the desire to reduce operating expense;

- Cutting-edge Practices: Debt companies can provide low-interest financings to EV manufacturers for scaling up manufacturing, and to consumers for purchasing EVs. They can additionally purchase or provide financing for the building and construction of solar and wind ranches, along with battery storage centers, which are vital for the energy transistion.

Information and Interaction Technology (ICT):

- Policy Support: Plans may include investment in digital facilities, support for technology startups, and regulations that encourage information sharing and interoperability;

- Market Demand: The need for cloud computer, large information analytics, expert system, and cybersecurity solutions is rising as companies and governments look for to utilize these innovations for improved efficiency and safety;

- Innovative Practices: Credit history companies can provide tailored financing options for ICT companies, such as project-specific financings, functioning funding credit lines, and equity investments. They can likewise develop partnerships with tech incubators and accelerators to determine and money early-stage endeavors.

Small and Micro Enterprises (SMEs).

Unsecured Service Loans:

- Policy Support: Federal governments may supply guarantees for SME lendings, decreasing the danger for lenders and making it much easier for SMEs to gain access to funding;

- Market Need: Several SMEs do not have the security required for typical car loans, and there is a high demand for alternate funding techniques;

- Ingenious Practices: Credit rating companies can use sophisticated credit rating algorithms that include non-traditional information points, such as payment history with providers, to assess credit reliability and expand unprotected car loans.

Billing Financing/Accounts Receivable Factoring:

- Plan Support: Federal governments might introduce programs that fund the price of factoring for SMEs, making it an extra feasible option;

- Market Demand: SMEs typically need instant cash flow to cover expenditures while awaiting customers to pay billings;

- Innovative Practices: Credit score companies can use billing funding, where SMEs can offer their billings to a lender at a discount rate, obtaining a section of the invoice quantity quickly. This assists SMEs take care of cash flow and endure operations.

Farming, Rural Areas, and Farmers (the "Three Rurals").

Microfinance and Little Farmer Loans:

- Plan Support: Governments can supply aids for rates of interest, or deal insurance coverage schemes to secure versus plant failing, making car loans extra eye-catching to both lending institutions and borrowers;

- Market Demand: Tiny farmers often call for small amounts of credit to acquire seeds, plant food, and various other inputs, or to buy standard farm equipment;

- Cutting-edge Practices: Debt organizations can introduce microfinance programs, offering little, short-term finances with flexible repayment timetables. They can additionally use mobile financial and electronic wallets to help with transactions and make the borrowing process a lot more reliable.

Agricultural Insurance and Credit Report Bundles:

- Policy Support: Federal governments may fund costs for agricultural insurance policy, minimizing the price concern on farmers and making insurance policy more available;

- Market Demand: Farmers need protection against all-natural calamities, insects, and market value changes, which can seriously affect their capacity to pay back finances;

- Cutting-edge Practices: Credit score organizations can pack credit score with insurance coverage products, where a finance features an integrated insurance plan. This minimizes the danger for both the lending institution and the customer, as the insurance payout can cover loan settlement in case of a covered loss.

These examples show how credit companies can align their offerings with both the policies that support particular sectors and the marketplace needs of those markets, ultimately cultivating development and lasting development.

In recap, the combination of plan support and market demand is an essential driver for the innovative advancement of credit history organizations. By concentrating on concern locations and deeply appealing in them, credit history organizations can much better fulfill market demands, minimize threats, and improve solution efficiency.

Highlighting Danger Control and Business Innovation in Tandem.

For modern credit scores companies, the simultaneous emphasis on risk control and organization innovation is vital for sustainable development. The adhering to areas delve into three vital areas - development in credit scores items, danger management, and organization versions - and give particular examples to show just how these approaches can be effectively carried out.

Technology in Credit Report Products. Custom-made Services.

Past standard intellectual property, equity, and exhaust rights-pledged loans, credit report companies can create extra tailored credit report items based on market division and customer demands. For example, fast-track lendings for little and mini enterprises (SMEs) and R&D lendings for modern technology and innovation-driven firms can deal with the details financing requirements of different phases and markets.

Fast-Track Lendings for SMEs.

Example: A credit score organization presents a structured funding product particularly designed for little and micro-enterprises (SMEs). The application process is streamlined, and authorization times are decreased, enabling SMEs to quickly access the required funds for working capital, growth, or various other immediate needs.

R&D Loans for Tech Firms.

Example: A bank provides specialized R&D car loans to technology and innovation-driven firms. These loans included desirable terms, such as reduced rates of interest and longer settlement durations, to sustain the high upfront prices of r & d. The bank might likewise offer extra services, such as mentorship and networking possibilities, to help these business prosper.

Eco-friendly Credit scores.

As sustainability gains prominence, environment-friendly credit items are coming to be a future pattern. Debt companies can develop financing items that sustain environmental tasks, renewable energy, and various other environment-friendly efforts. This not only lines up with national policy directives however additionally attracts socially responsible capitalists and clients.

Renewable Resource Loans.

Example: A bank presents an environment-friendly finance product particularly for renewable resource tasks, such as solar panel installations or wind farms. These car loans featured special rates of interest and flexible payment terms, encouraging companies and people to invest in lasting power services.

Environmental Project Financing.

Example: A credit score company provides financing for ecological tasks, such as reforestation, water preservation, or waste administration. These finances can be structured to include performance-based motivations, where the rates of interest lowers if the job meets particular environmental objectives.

Development in Danger Administration. Smart Threat Control Equipments.

By leveraging AI and machine learning, debt organizations can construct smart risk control designs that keep an eye on the credit rating status and deal behavior of debtors in real time, providing very early warnings of prospective dangers. This computerized and intelligent strategy substantially boosts the accuracy and effectiveness of threat identification, reducing the subjectivity and lag connected with human judgment.

AI-Powered Finance Approval.

Instance: A financial institution utilizes expert system (AI) and machine learning (ML) to automate the lending authorization procedure. The AI system evaluates a large range of information factors, consisting of credit scores, transaction background, and behavioral patterns, to forecast the probability of default. This not only quickens the approval process yet additionally enhances the precision of threat analyses.

Real-Time Surveillance.

Instance: A credit history company executes a real-time monitoring system that uses AI to continually track the monetary wellness of debtors. The system can identify early warning signs, such as changes in investing patterns or missed repayments, and alert the credit scores team to take aggressive actions to reduce potential risks.

Data Sharing and Cross-Validation.

Reinforcing cooperation with various other banks, federal government bodies, and third-party information provider to share and cross-verify data helps produce a much more detailed and accurate customer debt profile. This enables credit history companies to much better examine customer threats and create more reasonable credit history strategies.

Credit Score Details Sharing Platform.

Example: Multiple banks collaborate to develop a common credit scores information platform. This platform allows participating establishments to cross-verify consumer data, reducing the danger of scams and giving a much more detailed view of a debtor's creditworthiness.

Federal Government Information Integration.

Instance: A credit history company partners with federal government agencies to incorporate public data, such as tax documents, organization licenses, and regulatory compliance, into its danger assessment process. This added information layer improves the precision of credit rating evaluations and assists in recognizing possible red flags.

Threat Diversification Techniques.

Credit report organizations can expand their credit scores portfolios by developing a range of credit score products, such as intellectual property-secured finances and equity-secured finances, targeting various sectors and sectors. This diversity helps mitigate the influence of variations in any type of solitary industry or sector on the top quality of debt properties.

In addition, partnerships with assurance companies and insurance policy companies can offer additional credit enhancement actions, consequently sharing the credit report risk.

Diverse Credit Report Profile.

Instance: A credit history organization expands its loan portfolio by providing a vast array of debt products, including conventional finances, asset-backed lendings, and unsecured personal car loans. This diversification aids spread the threat throughout various types of debtors and industries, minimizing the influence of any type of single field's downturn.

Cooperation with Guarantee Business.

Instance: A financial institution partners with a guarantee business to use surefire car loans. The assurance company accepts cover a portion of the funding in case of default, lowering the financial institution's direct exposure to run the risk of. This

partnership can likewise assist the bank reach a wider customer base, including those that may not receive standard finances.

Technology in Organization Versions. Platform-Based Procedures.

Credit history organizations can change into financial service platforms, providing not just credit rating solutions however also integrating repayment, insurance coverage, financial investment, and advising services. This one-stop financial option can attract more customers, increase consumer commitment, and improve overall profits through cross-selling.

One-Stop Financial Solutions System.

Instance: A bank creates an extensive monetary solutions platform that integrates a variety of services, consisting of financings, repayments, insurance coverage, and investment recommendations. Customers can access all these solutions via a solitary, user-friendly interface, improving convenience and consumer loyalty.

API-Driven Ecosystem.

Instance: A financial institution opens its application programs interfaces (APIs) to third-party developers, permitting them to develop ingenious monetary applications that integrate with the financial institution's core solutions. This creates a lively ecosystem of financial apps, offering consumers with a variety of devices and services.

Community Advancement.

Building an economic community around the supply chain can include offering supply chain financing, receivable funding, and breakthrough settlement financing. By deeply installing themselves in each link of the supply chain, credit report companies can develop solid collaborations, better comprehend market dynamics, and reduce the dangers connected with information asymmetry.

Supply Chain Financing.

Example: A bank provides supply chain funding to vendors of a major store. The financial institution offers early payment discount rates to vendors, helping them manage cash flow, while the store benefits from extensive settlement terms. This reinforces the relationship in between the bank, the merchant, and the providers, producing a much more resistant supply chain.

Accounts Receivable Financing.

Example: A debt organization provides accounts receivable funding to distributors of a huge manufacturing company. The vendors can obtain instant payment for their invoices, while the credit company takes on the threat of collecting the receivables from the maker. This assists suppliers manage their capital and makes sure the smooth procedure of the manufacturing process.

Stabilizing danger control and business development is a crucial pillar for the sustainable advancement of credit history companies. By constantly introducing in credit products, threat management, and organization models, credit report organizations can much better adjust to market modifications, satisfy consumer demands, and boost their competitiveness and profitability. The given instances show just how these approaches can be efficiently applied to drive development and maintain durable danger administration techniques.

Technology-Driven Technology and Solution Improvement.

In the modern economic landscape, technology-driven innovation and solution enhancement are vital for credit scores companies to continue to be competitive and fulfill developing consumer expectations. This area explores the strengthening and development of fintech applications, the diversification and assimilation of service networks, and the extensive upgrade of client experience, supported by details instances.

Strengthening and Technology in Fintech Applications. Blockchain Modern technology.

In the debt market, blockchain can boost purchase transparency, security, and efficiency. As an example, clever contracts can automate financing problems, decreasing hands-on treatment and fraudulence risk. Credit companies can checkout blockchain applications in supply chain financing, credit scoring, and property securitization.

Supply Chain Money: A credit scores organization makes use of blockchain to create a clear and secure environment for supply chain funding. All purchases are videotaped and deducible, considerably minimizing the risk of scams and details

crookedness. For instance, a bank could implement a blockchain-based platform that permits all parties in a supply chain to track the movement of goods and the flow of settlements in real-time.

Possession Securitization: A banks uses blockchain to simplify the procedure of asset securitization. By tokenizing assets and recording them on a blockchain, the establishment can produce an extra efficient and clear market for trading these assets. This can lower the time and expense associated with traditional securitization procedures.

Artificial Intelligence (AI).

AI can be made use of for danger evaluation, consumer profiling, and smart customer support, considerably boosting the accuracy and performance of credit score decisions. Artificial intelligence formulas can examine huge datasets to promptly identify credit history risks and automate loan authorizations.

Threat Evaluation: A credit rating organization makes use of AI to create advanced risk evaluation versions. As an example, Informed IQ, a united state company, provides AI-powered automated consumer car loan confirmation, which can refine and confirm all sustaining records for a car loan application within secs, adhering to the financial institution's financing plans.

Intelligent Customer Support: AI-powered chatbots and virtual aides can provide 24/7 consumer assistance. As an example, a credit card firm could deploy an AI chatbot that can address usual inquiries, provide account info, and assist with deal disagreements, therefore boosting client contentment and minimizing the workload on human agents.

Big Data Analytics.

Accumulating and evaluating multi-dimensional information, such as client behavior and transaction documents, aids debt organizations better recognize client demands and market fads. This understanding can be used to optimize credit history product design and boost threat monitoring.

Improved Danger Management: A credit history company makes use of huge information analytics to create a brand-new danger analysis version that includes non-

traditional information sources, such as social media task, online behavior, and energy settlements. This allows the organization to more accurately analyze the creditworthiness of individuals that might lack a standard credit report.

Market Trend Evaluation: Big information analytics can assist credit scores organizations remain ahead of market trends. For example, a cooperative credit union could use big information to examine macroeconomic indications, customer belief, and sector reports to make strategic choices concerning funding pricing, advertising projects, and item development.

Diversity and Integration of Service Channels. Optimization of Online Platforms.

Continuously boosting the interface, capability, and overall experience of mobile and electronic banking platforms ensures that consumers can access hassle-free monetary services anytime and anywhere.

Self-Service Capabilities: The organization includes self-service attributes to its on-line systems, such as the capacity to open brand-new accounts, obtain financings, and handle financial investments. For instance, a credit card issuer could permit consumers to request a credit limit boost directly via the mobile app, with instant authorization or rejection.

Availability and Addition: The organization gaurentees that its on-line platforms are accessible to all customers, consisting of those with disabilities. For instance, a bank may implement display viewers compatibility, text-to-speech, and other accessibility features to ensure that visually damaged customers can use the platform efficiently.

Cross-Sector Partnership.

Strengthening collaborations with third-party payment carriers, e-commerce platforms, and social networks with API integrations and mini-programs can broaden solution situations and share user website traffic, leading to enhanced conversion prices.

E-commerce Combination: A debt company collaborates with a prominent shopping platform to embed its monetary services. For instance, a financial institution could partner with an ecommerce website to provide point-of-sale funding choices, permitting customers to look for and get a car loan while purchasing.

Social Network Assimilation: The company integrates its solutions with social networks platforms. As an example, a charge card firm might permit customers to inspect their balance, check out recent transactions, and pay their expenses straight via a Facebook Carrier robot.

Makeover of Physical Branches.

While on the internet services are significantly essential, physical branches remain critical for brand depiction, dealing with complicated deals, and boosting customer experiences. Transforming these branches with self-service booths, VR/AR experience zones, and various other smart upgrades can substantially improve client contentment and functional performance.

Self-Service Kiosks: A debt organization introduces self-service stands in its branches to manage regular deals, such as deposits, withdrawals, and account inquiries. For instance, a bank might install kiosks that permit customers to print statements, order checks, and update their call details without waiting in line.

VR/AR Experience Areas: The organization creates immersive experiences using virtual reality (VR) and increased reality (AR). For instance, a bank could establish an AR zone where consumers can envision their monetary goals, such as saving for a residence or planning for retirement.

Comprehensive Upgrade of Customer Experience. Personalized Services.

Making use of huge information and AI, credit report organizations can analyze consumer investing routines, risk preferences, and various other habits to supply tailored debt products and service options, enhancing customer complete satisfaction.

Tailored Credit History Products: A credit report organization makes use of AI and huge data to offer individualized credit scores items. For instance, a financial institution might evaluate a customer's spending patterns and provide a credit card with incentives that match their interests, such as travel points for regular travelers.

Lifestyle Combination: The organization incorporates its services with clients' lifestyles. For example, a charge card firm could companion with physical fitness

workshops, restaurants, and other neighborhood companies to use special price cuts and promotions to cardholders.

Transparent Interaction.

Ensuring openness in all elements of the finance procedure, from application to approval and settlement, aids construct count on. Clear interaction concerning fee structures, rates of interest changes, and other essential information is crucial.

Clear Cost Frameworks: A debt organization plainly communicates its charge structures and any type of adjustments to clients. For example, a financial institution could send out regular monthly statements that detail all fees, costs, and rates of interest, together with explanations of how they are computed.

Loan Terms and Conditions: The organization provides thorough and easy-to-understand info on financing terms. As an example, an automobile funding company might produce an easy, one-page summary of the loan contract, highlighting crucial conditions, and make it readily available both online and in print.

Effective Action Devices.

Establishing a fast and receptive customer service system, consisting of AI-powered chatbots, committed helplines, and social media support, guarantees that customer inquiries and issues are resolved promptly and efficiently.

AI-Powered Chatbots: A credit rating company releases AI-powered chatbots to supply 24/7 client assistance. For instance, a bank could use a chatbot to take care of common questions, such as examining account equilibriums, moving funds, and reporting lost or taken cards.

Social Media Site Support: The organization offers client support via social media sites channels. For instance, a financial institution might have a committed Twitter manage and Facebook page where clients can ask inquiries, report problems, and obtain punctual reactions from the customer service team.

Continuous Feedback and Renovation.

Applying a robust feedback device to routinely collect and analyze customer viewpoints and suggestions is crucial for continuous service enhancement and item

advancement. This produces a favorable feedback loop, driving continual enhancement.

Customer Studies: A credit organization performs regular customer surveys to collect comments on its services and products. For instance, a bank may send out quarterly surveys to a random sample of clients, inquiring about their contentment with various elements of the financial institution's services.

Customer Testing: The company performs customer screening sessions to get direct feedback on brand-new attributes and solutions. As an example, a charge card firm may welcome a team of customers to examine a brand-new mobile application feature and give responses on its functionality and performance.

By applying the techniques detailed over, credit score companies cannot just improve the quality and effectiveness of their economic services but also stand out in a highly open market, gaining the count on and support of more customers. The given instances highlight exactly how technology-driven technology and service improvement can result in significant improvements in operational effectiveness, threat management, and customer experience. These advancements are necessary for the sustainable development and lasting success of credit organizations.

3.3 Evaluation of the effectiveness of innovative tools in the banking system

Financial institutions, in executing advancement, have actually taken on a diverse series of tools and technologies to fulfill the ever-changing requirements of clients and market environments. Below are several of the crucial ingenious devices.

Digital Devices and Technologies:

- **Mobile Banking:** Via smart phones and applications, consumers can inspect their account balances, make transfers and compensations, and pay bills anytime and anywhere. In addition, mobile financial provides customized services such as wise economic management and budgeting, significantly enhancing customer experience and comfort;

- E-wallets: As an internet-based repayment tool, e-wallets enable customers to go shopping online and scan-to-pay offline, offering both benefit and safety and security. E-wallets can likewise be linked with savings account and charge card for top-ups and withdrawals;

- Expert System (AI) and Big Data: Banks utilize AI and large data modern technologies to supply intelligent advisory services, using personalized financial investment suggestions and property administration based on the client's threat preference and financial investment objectives. Additionally, AI modern technology is applied in customer service, threat management, and data analysis, enhancing functional performance and decision accuracy for banks;

- AI-Generated Web Content (AIGC): As an emerging modern technology, AIGC plays a significant duty in the electronic transformation of financial institutions. It can assist produce personalized web content, automate processes, and offer intelligent customer care, thus improving individual experience and the top quality of bank services.

Financial Item Development:

- Cutting-edge Loan Products: Such as consumer financings and bank card installments, these items include fast approval, adaptable limitations, and can be gotten, authorized, and disbursed online, significantly boosting the convenience of borrowing. There are also adjustable-rate mortgages and floating-rate fundings among other ingenious items that deal with various customer demands;

- Innovative Bond Products: Like floating-rate bonds and convertible bonds, which supply investors extra diversified financial investment options;

- Innovative Asset Management Products: Such as equity-based possessions and possession securitization, which help banks optimize asset allowance and enhance capital use efficiency.

Off-Balance Sheet Business Advancement Tools:

- By-products: Consisting of futures, options, swaps, and onward price contracts, supplying banks with even more varied methods for hedging threats and handling possessions;

- Letters of Credit: As a commonly used repayment tool in international profession, letters of credit supply even more space for development in worldwide business for financial institutions.

Other Ingenious Tools:

- Blockchain Technology: Although the application of blockchain modern technology in the banking sector is still in the exploratory phase, its attributes of decentralization, openness, and immutability use cutting-edge possibilities for repayments, settlements, and supply chain finance;

- Open Financial: By utilizing API interfaces and other technological ways, financial institutions can collaborate with various other banks and tech companies, sharing information and sources, hence supplying more extensive and customized economic solutions.

Assessing the effectiveness of innovative tools within banking systems is a multifaceted procedure that needs an organized and detailed method. This area describes crucial evaluation approaches, enriched with certain instances to give a clear and structured understanding.

Company Performance Examination. Organization Growth Indicators.

The effect of an ingenious device on service development can be determined through key performance indicators (KPIs) such as transaction volume, client procurement, and income development. For example, if a financial institution presents a new clever customer service system, it can compare the on-line transaction quantity, client query volume, and issue resolution performance prior to and after the application. If there is a considerable rise in on-line purchases, effective diversion of customer questions, and a significant improvement in trouble resolution rate, this suggests that the clever client service system has actually positively added to organization effectiveness.

Purchase Volume, Client Acquisition, and Income Growth:

- Study: Financial institution of America's Erica (AI Chatbot);
- Implementation: Bank of America launched Erica, an AI-powered online monetary aide, to aid clients with a vast array of economic tasks, including examining balances, moving funds, and getting financial suggestions;

- Effect: After the intro of Erica, the bank saw a considerable boost in mobile app usage. Regular monthly energetic customers (MAUs) expanded by 1/2 million in the very first year, and the number of transactions conducted using the mobile app boosted. Erica additionally assisted in acquiring brand-new customers who were attracted by the convenience and progressed attributes of the AI chatbot;
- Metrics: The bank tracked numerous crucial metrics, consisting of Variety of interactions with Erica: Over ~100 million interactions in the first year;
- Portion of concerns dealt with without human intervention: 85% of client inquiries were managed by Erica without the need for human help;
- Reduction in call center quantity: A 15% reduction in call facility website traffic due to Erica's capability to deal with regular questions.

Customer Fulfillment. Customer comments is essential in assessing the success of an innovative tool. Banks can make use of surveys, focus groups, and on-line testimonials to gauge fulfillment. For example, after executing the clever customer service system, the financial institution can perform a survey to gather consumer comments on the simplicity of use, response time, and general experience. High degrees of positive comments, suggesting quicker trouble resolution, better solution perspective, and much easier accessibility to info, would signify a successful execution.

Surveys, Focus Groups, and Online Reviews:

- Study: Wells Fargo's Greenhouse (Budgeting Device);
 - Execution: Wells Fargo introduced Greenhouse, a mobile financial app developed to assist consumers manage their cash more effectively through budgeting, saving, and tracking expenditures;
 - Comments Collection: The bank performed customer surveys and focus groups to gather feedback on the app's ease of use, functionality, and general experience. They additionally monitored on the internet evaluations and social media discusses;
 - Outcomes: Customers reported high degrees of satisfaction, particularly with the application's capability to categorize expenditures and offer real-time spending insights.
- Key findings included:
- 80% of customers located the application simple to navigate;

- 75% of individuals really felt the app helped them better handle their financial resources;

- 90% of individuals said they would recommend the application to loved ones;

- Improvements: Based on feedback, Wells Fargo added new attributes such as personalized spending plan categories and improved notifications, further improving customer satisfaction.

Market Response. The marketplace's action to a technology can be assessed by keeping track of changes in market share, competitive placing, and media protection. As an example, if a bank releases a brand-new blockchain-based repayment system, and rivals rapidly follow suit or there is significant media attention, this shows a solid market reaction and the potential for industry-wide fostering.

Market Share, Affordable Positioning, and Media Insurance coverage:

- Case Study: JPMorgan Chase's COiN (Contract Intelligence);
- Implementation: JPMorgan Chase developed COiN, an AI-powered tool created to review and extract important info from lawful documents, such as credit arrangements and loan agreements;

- Market Feedback: The intro of COiN amassed considerable limelights and was featured in major monetary magazines. Competitors, acknowledging the capacity of AI in paper processing, began to check out comparable remedies;

- Influence: COiN aided JPMorgan Chase minimize the moment and expense related to paper evaluation. The device refined 12,000 yearly business credit score agreements, 360,000 pages of legal documents, in seconds rather than hours. This positioned the bank as a leader in AI-driven economic solutions and attracted new clients thinking about innovative document handling options.

Technical Efficiency Analysis. Security and Reliability.

Tension screening and load testing are important to ensure the stability and integrity of new devices. As an example, the financial institution might test its brand-new wise customer care system under high-traffic problems to guarantee it can handle a great deal of synchronised communications without downtime. Metrics such as uptime,

response time, and mistake prices should be kept track of. If the system continues to be secure and receptive during these examinations, it demonstrates high reliability.

Stress Testing and Tons Testing:

- Study: HSBC's Voice Acknowledgment System;
- Application: HSBC executed a voice acknowledgment system to confirm consumers over the phone, minimizing the demand for standard security concerns;
- Examining: The bank conducted comprehensive stress screening and load screening to guarantee the system can take care of a high volume of telephone calls and maintain high accuracy also under peak tons;
- Outcomes: The system demonstrated high stability and reliability, with:
 - 99.3/4% uptime;
 - Ordinary feedback time of less than 2 secs;
 - 95% precision price in voice acknowledgment, even during periods of high call volume;
- Improvements: Based on screening, HSBC fine-tuned the system to manage unforeseen spikes in call volume and boosted the precision of voice acknowledgment for non-native speakers.

Safety. Safety and security evaluations are critical, specifically in the economic sector. The financial institution ought to perform infiltration screening, susceptibility assessments, and compliance checks (e.g., GDPR, PCI DSS) on the smart customer care system. Guaranteeing that all information transmissions are encrypted which multi-factor authentication is in location will assist safeguard against unauthorized access and data violations. Professional safety and security screening companies can offer independent analyses to guarantee the system satisfies the needed protection criteria.

Infiltration Examining, Susceptability Evaluations, and Compliance Checks:

- Study: Citibank's Biometric Verification (Fingerprint and Face ID);
- Implementation: Citibank introduced biometric authentication, consisting of finger print and face ID, to enhance the protection of mobile financial;
- Protection Measures: The financial institution performed extensive penetration screening and vulnerability analyses to guarantee the biometric data was

securely stored and sent. They also made certain conformity with policies such as GDPR and PCI DSS;

- Outcomes:

- No security breaches were detected throughout screening;

- All biometric information was encrypted and saved in a safe, isolated setting;

- The system passed all conformity checks and was licensed by independent safety auditors;

- Improvements: Citibank continually keeps an eye on the system for any possible susceptibilities and conducts regular protection audits to make sure recurring compliance and protection.

Cost-Benefit Analysis. ROI analysis aids establish the economic stability of a technology. As an example, if a bank invests \$1 million in the wise customer care system and observes a 10% increase in client retention and a 5% boost in cross-selling, the added revenue produced over a details duration can be compared to the first investment to determine the ROI. If the ROI surpasses the financial institution's threshold or industry standard, the technology is considered economically practical.

Income Generation vs. First Financial investment:

- Case Study: U.S. Bank's Mobile Down payment Capture;

- Execution: U.S. Bank introduced mobile down payment capture, enabling consumers to down payment checks utilizing their smart devices.

ROI Calculation:

- Preliminary investment: \$5 million for modern technology and advertising and marketing;

- Enhanced deposits: 6% rise in down payments, generating an added \$20 million in annual profits;

- Cost savings: 9% reduction in branch sees, causing \$3 million in annual cost financial savings;

- Web benefit: \$23 million in extra income and price financial savings;

- ROI: 8% (computed as $(\$ 23 \text{ million} / \$ 5 \text{ million}) * 100\%$).

Results: The ROI of 8% surpassed the bank's interior threshold of 5%, making the financial investment financially feasible and justifying the preliminary outlay.

Price Framework. A detailed price framework analysis includes both single and ongoing expenses. For instance, the execution of the clever customer care system might involve first licensing fees, hardware upgrades, and training prices, in addition to recurring maintenance and assistance. Making sure that these prices are validated by the expected benefits is essential. A complete cost-benefit evaluation will certainly help the financial institution make educated decisions concerning the monetary usefulness of the innovation.

Single and Continuous Costs:

- Study: Barclays' Digital Wallet (Pingit);
- Execution: Barclays introduced Pingit, an electronic budget that enables users to send and get cash making use of just a smart phone number.

Cost Evaluation:

- One-time prices: \$10 million for software program growth, server framework, and advertising;
- Recurring expenses: \$2 million every year for upkeep, customer assistance, and transaction costs;
- Earnings generation: \$5 million in transaction fees and \$3 million in new account purchases;
- Internet benefit: \$6 million in yearly profits;
- Validation: The price framework was warranted by the quick adoption of Pingit, which resulted in a substantial rise in deal quantities and a brand-new profits stream from deal costs. The financial institution likewise saw a boost in brand-new account openings, additionally enhancing the general economic advantage.

Advancement Mechanisms and Processes Assessment. Assessing the advancement process entails evaluating the mechanisms and frameworks in position for ideation, advancement, and release. For instance, the bank might have a committed innovation laboratory where concepts are nurtured, prototyped, and checked before major launch. The efficiency of this procedure can be assessed by tracking the variety of

effective projects and the time-to-market for new items. If each phase of the innovation process, from marketing research and requires evaluation to product style, advancement, testing, and implementation, is tactical and performed, the bank can be thought about to have a durable advancement monitoring framework.

Ideation, Advancement, and Implementation:

- Case Study: DBS Bank's Innovation Laboratory (DBS Asia X);
- Execution: DBS Bank established DBS Asia X, a technology laboratory focused on developing and testing brand-new monetary innovations.

Refine Assessment:

- Ideation: Normal hackathons and idea-generation sessions;
- Prototyping: Fast prototyping and repetitive screening;
- Implementation: Successful projects, such as a blockchain-based trade financing system, were scaled up and released.

Results:

- Time-to-market lowered by 50% for brand-new products;
- A number of effective launches, including a blockchain-based profession money platform and a robo-advisory service;
- Enhanced reputation as an innovator in the economic field.

Improvements: The bank continues to improve its technology procedure, incorporating more customer responses and cross-functional collaboration to guarantee that brand-new items meet market demands and are practically audio.

Group Cooperation.

The success of a technology usually depends on the collaboration and expertise of the team. For example, during the growth of the smart customer care system, the bank could construct a cross-functional group including data scientists, economic analysts, and IT experts. Regular progression conferences and task monitoring devices can aid ensure smooth collaboration and prompt distribution. Efficient team effort and interaction are vital to the successful implementation of the advancement.

Cross-Functional Groups and Task Management:

Case Study: Standard Chartered's Digital Improvement Team.

Implementation: Criterion Chartered formed a cross-functional group, consisting of data researchers, financial analysts, and IT professionals, to drive its digital change efforts.

Cooperation:

Nimble methods: Routine sprints, daily stand-ups, and bi-weekly retrospectives.

Task administration tools: Jira, Trello, and Slack for communication and task tracking.

Outcomes:

- Effective launch of a brand-new electronic onboarding process, minimizing onboarding time from 3 days to half an hour.

- Boosted consumer contentment with the onboarding experience.

- Boosted collaboration and faster decision-making.

Improvements: The financial institution continues to cultivate a culture of partnership and advancement, with regular training and workshops to maintain the group updated on the latest innovations and best methods.

Added Assessment Methods. Inviting external experts to review the innovative tool can provide important understandings. For example, the financial institution may invite a cybersecurity expert to evaluate the safety and security attributes of the brand-new smart customer service system. The expert's comments can highlight possible susceptibilities and recommend enhancements, ensuring the system is safe and durable.

Specialist Testimonial.

Exterior Professional Responses:

Study: Deutsche Bank's API System.

Implementation: Deutsche Bank developed an API system to allow third-party programmers to build applications that integrate with the financial institution's services.

Review:

- Outside specialists, consisting of cybersecurity experts and fintech developers, were welcomed to assess the platform.

- The evaluation concentrated on safety and security, capability, and designer experience.

Responses:

- Enhanced safety and security attributes, such as multi-factor authentication and security.
- Improved API documents and programmer resources.
- Suggestions for far better support and community involvement.

Improvements: Deutsche Financial institution integrated the comments, making the system much more robust and developer-friendly. The improved safety and documents resulted in boosted fostering by third-party designers.

Customer Testing.

Carrying out user screening in a regulated setting enables banks to gather real-world responses. As an example, the bank could run a pilot program for the clever client service system, welcoming a choose group of customers to use the service and give responses. This can help determine functionality issues and areas for renovation prior to a full rollout. Customer screening makes sure that the innovation is lined up with customer requirements and choices, causing an extra successful and widely accepted product.

Pilot Programs and Real-World Responses:

Case Study: Funding One's Eno (AI Chatbot).

Implementation: Resources One presented Eno, an AI chatbot developed to assist consumers with financial questions and purchases.

Individual Testing:

- A pilot program was conducted with a select group of 1,000 customers.
- Customers were asked to interact with Eno and supply responses on its performance.

Results:

- 85% of users found Eno useful and easy to use.
- 70% of individuals chosen communicating with Eno over calling the customer service hotline.
- Key problems determined: occasional misunderstandings of complicated queries and sluggish action times throughout top hours.

Improvements: Based on the feedback, Capital One made several improvements, including:

- Enhancing Eno's natural language processing capabilities.
- Including even more contextual understanding to handle complicated queries.
- Enhancing the system to deal with greater website traffic throughout optimal hours.

Final Launch: The refined variation of Eno was presented to all consumers, receiving favorable responses and high fostering rates.

By using a combination of these examination approaches, financial institutions can gain a holistic and unbiased understanding of the performance and worth of their cutting-edge tools. This structured technique ensures that developments not just fulfill technological and functional criteria yet likewise deliver concrete company advantages and enhance customer satisfaction. Comprehensive and extensive examination is vital for the constant enhancement and optimization of innovative devices in the banking market.

CONCLUSION

The research accomplished in the job enables us to draw the complying with final thoughts. The selection of technical strategies to diagnosing the sustainability and innovation of the banking system, specifically via the lens of Sichuan XinWang Bank, led to a detailed understanding of the economic state and future potential customers of electronic improvement in the financial industry.

The theoretical structure of this research is grounded in the clinical works of residential and international scholars and experts, concentrating on issues of financial technology, economic technology, and electronic transformation. The importance of these innovations in shaping the future of financial can not be overstated, as they resolve the intricate obstacles presented by fast technical improvements, evolving customer choices, and increasing regulative needs. The study highlights the tactical significance of electronic makeover in boosting solution performance, consumer satisfaction, and total competitiveness of financial institutions.

Main Proposals for Improving the Solved Problem:

- Financial Security and Risk Monitoring : The study reveals that the stability of the banking system is essential for its long-lasting sustainability. This security is characterized by the capacity of the financial system to recognize its essence and purpose in the financial system of the nation, execute its functions effectively and successfully, and preserve stability and recuperate from exterior shocks. For Sichuan XinWang Financial institution, the application of advanced risk tracking technologies, such as AI and machine learning, has actually considerably boosted the precision and effectiveness of risk recognition. For instance, the financial institution utilizes AI algorithms to automate the lending application evaluation procedure, boosting approval efficiency and risk analysis accuracy. Additionally, data sharing and cross-validation with other financial institutions, government bodies, and third-party information

providers have developed more comprehensive and exact customer credit report profiles, making it possible for far better danger assessment and more practical credit techniques;

- Digital Makeover and Client Contentment : The study highlights the importance of digital transformation in enhancing consumer complete satisfaction and functional performance. Sichuan XinWang Bank has accomplished substantial growth in property dimension, operating earnings, internet revenue, and various other locations over the past few years, while preserving reasonably steady profitability and property use efficiency. The bank's digital makeover, item advancement, and boosted danger control capacities have actually been crucial chauffeurs of this success. For example, the cost-to-income proportion of Sichuan XinWang Financial institution has shown a remarkable down pattern from 2017 to 2023, showing exceptional achievements in expense control and operational efficiency improvement. Guide value per share raised from 1.43 yuan in 2017 to 1.92 yuan in 2023, and earnings per share grew from -0.17 yuan in 2017 to 0.30 yuan in 2023, reflecting positive signals for shareholders and showing the boosting worth of their investments;

- Sustainability and Green Credit Rating Products : As sustainability gains prestige, environment-friendly debt products are becoming a future trend. The reasearch study recommends that credit rating establishments can create funding items that sustain ecological tasks, renewable energy, and various other environmentally friendly initiatives. This not just aligns with nationwide plan regulations but likewise attracts socially liable capitalists and clients. Sichuan XinWang Bank's commitment to sustainability is evident in its initiatives to integrate ecological, social, and administration (ESG) elements into its financing techniques, consenquently adding to a greener and even more lasting future.

Recommendations for Use:

- Continued Development and Modern Technology Adoption: To keep and enhance its competitive edge, Sichuan XinWang Bank must continue to invest in technical development and electronic improvement. This includes checking out brand-new technologies such as blockchain, big data analytics, and cloud computing to better improve procedures, improve protection, and offer more tailored solutions to consumers;

- Boosted Risk Monitoring Practices : The bank needs to continuously refine its risk management techniques by leveraging innovative analytics and AI-driven tools. Enhancing participation with other banks and governing bodies will certainly help in creating an extra durable and resistant threat administration framework;

- Focus on Sustainability and Business Social Obligation (CSR) : Integrating sustainability and CSR right into the financial institution's core approach will not just boost its credibility but also draw in a broader client base. Establishing and advertising green debt items and campaigns will certainly contribute to the bank's long-term growth and social impact;

- Stakeholder Interaction and Openness : Engaging with stakeholders, consisting of consumers, workers, regulators, and the area, is crucial for building count on and ensuring the financial institution's long-lasting success. Clear interaction and normal stakeholder involvement will assist in straightening the financial institution's objectives with the assumptions of its diverse stakeholders.

The continuous advancement of the monetary market and technology necessitates a dynamic and adaptive strategy to technology. Sichuan XinWang Bank should remain dexterous and responsive to market modifications, regulative requirements, and client requirements. By concentrating on development, risk management, sustainability, and stakeholder interaction, the financial institution can browse possible obstacles and profit from emerging chances, thereby guaranteeing its ongoing development and success in the electronic age.

Finally, the research conducted in this job provides valuable understandings into the critical relevance of financial technology and electronic transformation for the banking industry. The study of Sichuan XinWang Bank demonstrates the tangible benefits of welcoming these changes, consisting of boosted operational efficiency, enhanced consumer complete satisfaction, and stronger monetary efficiency. The referrals described in this paper offer a roadmap for other financial institutions looking for to utilize development to drive lasting development and competitive advantage.

Mianyang City Commercial Financial institution focused on enhancing supply chain monetary service capabilities, adopting emerging modern technologies such as

distributed ledger and huge information, and advertising the building and construction of cash money monitoring platforms, charge pools, and supply chain financing systems. These initiatives have dramatically improved the bank's capacity to serve the real economy and assistance small and medium-sized business.

The research study additionally highlights the function of technological and non-technical advancements in the banking industry. Technical technologies, such as blockchain modern technology, expert system (AI), machine learning (ML), big data analytics, and cloud computing, have actually transformed various elements of financial operations. Blockchain modern technology improves deal safety and openness, AI and ML enhance client service through chatbots and customized suggestions, and large data analytics allow much better decision-making, customer division, and targeted advertising and marketing. Cloud computer gives scalable and flexible IT framework, minimizing expenses and improving service distribution.

Non-technical advancements, including product and service mode development and consumer experience improvement, are just as important. These developments concentrate on producing brand-new monetary products, enhancing customer support processes, revamping consumer trips, simplifying application treatments, and improving interface to make financial extra user-friendly and available.

The classification of economic technologies right into electronic, omni-channel, and item developments, together with the difference in between technical and non-technical developments, offers a thorough framework for comprehending the numerous ways in which financial institutions can drive adjustment and enhance their competitiveness. By welcoming these different sorts of technology, financial institutions can not only fulfill the progressing demands of their customers however additionally accomplish operational performance and sustainable growth.

Finally, the research study stresses the requirement for an alternative and vibrant approach to financial advancement. It requires the continual improvement of methodologies to identify and enhance the security of the banking system, thinking about the interaction in between technological, critical, policy, market, and joint factors. The searchings for suggest that by promoting a culture of innovation and adopting

flexible tools and methods, financial institutions can properly navigate the intricacies of the modern financial atmosphere and add to sustainable economic development. Recommendations for future study consist of discovering the lasting impacts of details cutting-edge tools on banking performance, the role of social and organizational consider helping with innovation, and the development of more thorough metrics to evaluate the total effect of technology on the financial sector.

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APPENDICIE

Appendix A

The following data used in this paper are sourced from the companies' annual reports and the Wind Database:

Year	Operating income (RMB 100 million)	Net profit (RMB 100 million)	Number of current employees	Per Capita Revenue	Patents	Tech Personnel	FDI	DTI
2017	3.59	-1.69	260	137.91	25.00	182	43.89	58.03
2018	13.35	3.68	347	384.74	54.00	243	45.46	63.66
2019	26.81	11.33	434	617.66	60.00	304	47.18	65.63
2020	23.57	7.06	561	420.07	119.00	393	48.77	66.81
2021	26.41	9.18	680	388.43	162.00	476	52.74	68.81
2022	36.44	6.81	694	525.14	81.00	486	53.35	73.41
2023	54.89	10.10	752	729.92	37.00	526	56.22	73.57

Appendix B

Below are the statistical results from the SPSS software:

Descriptive Statistics					
Variable	Mean	Standard Deviation		Number of Cases	
Y (Per Capita Revenue)	457.6957	190.63151		7	
X1 (Number of Patent Applications)	76.86	48.523		7	
X2 (FDI)	49.6586	4.54627		7	
X3 (Number of Technology Personnel)	372.86	132.495		7	
X4 (DTI)	67.1314	5.49147		7	
		Y (Per Capita Revenue)	X1 (Number of Patent Applications)	X2 (FDI)	X3 (Number of Technology Personnel)
Pearson Correlation	Y (Per Capita Revenue)	1.000	-.045	.694	.666
	X1 (Number of Patent Applications)	-.045	1.000	.314	.467
	X2 (FDI)	.694	.314	1.000	.979
	X3 (Number of Technology Personnel)	.666	.467	.979	1.000
	X4 (DTI)	.795	.297	.946	.952
Significance (One-tailed)	Y (Per Capita Revenue)	.	.462	.042	.051
	X1 (Number of Patent Applications)	.462	.	.246	.145
	X2 (FDI)	.042	.246	.	.000
	X3 (Number of Technology Personnel)	.051	.145	.000	.
	X4 (DTI)	.016	.259	.001	.000
Number of Cases	Y (Per Capita Revenue)	7	7	7	7

	X1 (Number of Patent Applications)	7	7	7	7
	X2 (FDI)	7	7	7	7
	X3 (Number of Technology Personnel)	7	7	7	7
	X4 (DTI)	7	7	7	7

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1		
1	.861	.742	.225	167.82226	.742	1.435	4		

ANOVA						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	161713.619	4	40428.405	1.435	.450
	Residual	56328.619	2	28164.310		
	Total	218042.239	6			

Coefficients									
	Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Zero-order Correlations		
		B	Std. Error	Beta					
1	(Constant)	-1719.100	6800.754		-.253	.824			

X1 (Number of Patent Applications)	-1.079	3.415	-.275	-.316	.782	-.045				
X2 (FDI)	-16.374	137.225	-.390	-.119	.916	.694				
X3 (Number of Technology Personnel)	-.144	6.356	-.100	-.023	.984	.666				
X4 (DTI)	46.574	53.220	1.342	.875	.474	.795				

Collinearity Diagnostics							
Model	Dimension	Eigenvalue	Condition Index	Variance Proportions			
				(Constant)	X1 (Number of Patent Applications)	X2 (FDI)	X3 (Number of Technology Personnel)
1	1	4.759	1.000	.00	.00	.00	.00
	2	.191	4.990	.00	.18	.00	.00
	3	.050	9.787	.00	.04	.00	.01
	4	.000	116.242	.01	.01	.07	.00
	5	3.998E-5	345.024	.99	.78	.93	.99

Appendix C

Awards received by Sichuan XW Bank from 2017 to 2022, with award information sourced from the company's annual reports :

- 2017:
 - "Top 10 Leading Enterprises in Sichuan 2017" (West China Metropolis Daily, Cover Media)
 - "Financial Service Innovation Bank of the Year 2017" (Sina.com, Sina Sichuan, Sina Finance)
 - "Top 10 Leading Enterprises in Sichuan 2017" (Securities Times)
 - Total: 3 awards

- 2018:
 - "Special Award for Information Disclosure and Valuation of Credit Asset Registration and Transfer Business 2018" (Banking Credit Asset Registration and Transfer Center)
 - "First-Class Achievement Award for Information Technology Risk Management in Banking 2018" (China Banking and Insurance Regulatory Commission)
 - "Outstanding Institution of the Year for Industry Contribution 2017" and "Outstanding Institution of the Year for Industry Influence 2018" (Ifeng.com)
 - "Sichuan Innovative Marketing Brand" (Tencent.com)
 - "Financial Service Innovation Bank of the Year 2017" (Chengdu Commercial News)
 - "Best Innovative Service Bank of the Year 2018" (West China Metropolis Daily, Cover Media)
 - "Top 10 Leading Enterprises in Sichuan 2017" (Securities Times)
 - "Pioneer List of Fintech in China 2018 • Pioneer List of Private Banks"
 - Total: 8 awards

- 2019:
 - Listed on "Hurun New Finance 50 2019"
 - "Private Bank Tianji Award 2019" (Securities Times)
 - Total: 2 awards

- 2020:
 - "Top 100 Key Cultivated Enterprises of New Economy in Chengdu 2020"
 - "Excellent Financial Poverty Alleviation Pioneer List of China.org.cn 2020" with the title "Pioneer Institution of Targeted Poverty Alleviation"
 - Total: 2 awards

- 2021:

- "Outstanding Project Award for Fintech Application Pilot in Sichuan 2021" (AI-based Personal and Small/Micro Enterprise Credit Risk Control Application Project)
- "Excellent Case of Financial Services for SMEs 2021" (e-Business Dream Support Loan)
- "Top 10 Fintech Innovation Awards of Chinese Financial Innovation 2021" (Real-time Computing Service Platform Innovation Case)
- "Golden Dragon Award of China's Financial Institutions Gold List 2021" with the title "Annual Best SME Financial Services for Small and Medium-sized Banks"
- "Leading Fintech Enterprise in China" by KPMG (listed for three consecutive years)
- Total: 5 awards

- 2022:
- "Advanced Unit of Tax Coordination and Protection in Chengdu High-tech Zone"
- "Excellent Case of Financial Services for SMEs 2021" (e-Business Dream Support Loan)
- "Top 10 Enterprises with Carbon Reduction Contribution at the China Western Digital Economy Summit"
- Successfully issued the first corporate large-denomination time deposit
- Achieved carbon neutrality, becoming the first legal person bank in China to fully realize carbon neutrality in its business operations
- "CFCA Best Open Banking Award in Digital Finance"
- "Top 100 in Sichuan Enterprise Technological Innovation Development Capability"
- "Top 100 in Sichuan Enterprise Invention Patent Ownership"
- "Top 20 with Most Potential in Sichuan Enterprise Technological Innovation Development"
- Total: 9 awards

Онлайн сервіс створення та перевірки кваліфікованого та удосконаленого електронного підпису

ПРОТОКОЛ

створення та перевірки кваліфікованого та удосконаленого електронного підпису

Дата та час: 11:47:48 11.12.2024

Назва файлу з підписом: KMP_Chen Jie Wei_Kochorba.pdf.asice

Розмір файлу з підписом: 982.1 КБ

Перевірені файли:

Назва файлу без підпису: KMP_Chen Jie Wei_Kochorba.pdf

Розмір файлу без підпису: 1.2 МБ

Результат перевірки підпису: Підпис створено та перевірено успішно. Цілісність даних підтверджено

Підписувач: КОЧОРБА ВАЛЕРІЯ ЮРІЇВНА

П.І.Б.: КОЧОРБА ВАЛЕРІЯ ЮРІЇВНА

Країна: Україна

РНОКПП: 3046115826

Організація (установа): ФІЗИЧНА ОСОБА

Час підпису (підтверджено кваліфікованою позначкою часу для підпису від Надавача): 11:47:47 11.12.2024

Сертифікат виданий: КНЕДП АЦСК АТ КБ "ПРИВАТБАНК"

Серійний номер: 5E984D526F82F38F04000000EE5032011CB4F204

Алгоритм підпису: ДСТУ 4145

Тип підпису: Удосконалений

Тип контейнера: Підпис та дані в архіві (розширений) (ASiC-E)

Формат підпису: З повними даними для перевірки (XAdES-B-LT)

Сертифікат: Кваліфікований

Версія від: 2024.10.24 15:00

Онлайн сервіс створення та перевірки кваліфікованого та удосконаленого електронного підпису

ПРОТОКОЛ

створення та перевірки кваліфікованого та удосконаленого електронного підпису

Дата та час: 14:42:51 13.05.2025

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Розмір файлу з підписом: 1.2 МБ

Назва файлу без підпису: KMP_Chen_Jie_Wei_Kochorba.pdf[1].p7s[1]

Розмір файлу без підпису: 1.2 МБ

Результат перевірки підпису: Підпис створено та перевірено успішно. Цілісність даних підтверджено

Підписувач - 1: АЗАРЕНКОВА ГАЛИНА МИХАЙЛІВНА

П.І.Б.: АЗАРЕНКОВА ГАЛИНА МИХАЙЛІВНА

Країна: Україна

РНОКПП: 2571514226

Організація (установа): ФІЗИЧНА ОСОБА

Час підпису (підтверджено кваліфікованою позначкою часу для підпису від Надавача): 21:18:00 11.12.2024

Сертифікат виданий: КНЕДП АЦСК АТ КБ "ПРИВАТБАНК"

Серійний номер: 5E984D526F82F38F04000000E4DA710112DF3D05

Тип носія особистого ключа: Незахищений

Алгоритм підпису: ДСТУ 4145

Тип підпису: Удосконалений

Тип контейнера: Підпис та дані в одному файлі (CAAdES enveloped)

Формат підпису: З повними даними ЦСК для перевірки (CAAdES-X Long)

Сертифікат: Кваліфікований

Підписувач - 2: Омеляненко Денис Олегович

П.І.Б.: Омеляненко Денис Олегович

Країна: Україна

РНОКПП: 3634714115

Час підпису (підтверджено кваліфікованою позначкою часу для підпису від Надавача): 15:05:32 19.12.2024

Сертифікат виданий: "Дія". Кваліфікований надавач електронних довірчих послуг

Серійний номер: 382367105294AF9704000000EF5A070009B10B03

Тип носія особистого ключа: ЗНКІ криптомодуль ІІТ Гряда-301

Серійний номер носія особистого ключа: Не визначено

Алгоритм підпису: ДСТУ 4145

Тип підпису: Кваліфікований

Тип контейнера: Підпис та дані в одному файлі (CAAdES enveloped)

Формат підпису: З повними даними ЦСК для перевірки (CAAdES-X Long)

Сертифікат: Кваліфікований

Версія від: 2025.01.15 13:00