

ENHANCING FINANCIAL INCLUSION: AN EMPIRICAL STUDY IN VIETNAM AND POLICY IMPLICATIONS

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ABSTRACT. Studying the situation of Financial Inclusion (FI) to enhance the development of FI is remarkably essential as we begin to determine the subjects which need capital for production and business activities, hence finding the solutions to diversify financial products and services as well as expand providing methods so that these subjects are able to access and make use of financial products and services easily and effectively. Other countries have implemented the process of enhancing FI for a long time and Vietnam has been conducting this process to further strengthen financial inclusion. This article comprises the literature review of FI, Vietnam situation of FI including The general situation of accessing financial inclusion; The situation of physical infrastructure; The situation of microfinance development scheme; The current situation of applying information technology and enhancing FI at some banks; Preliminary assessment of existing issues and Policy implications.

1. Literature Review

According to Takeshi Inoue (2019), *Financial inclusion and poverty reduction in India*, this paper aims to investigate the impacts of commercial banks on financial inclusion development. The result shows that FI has some characteristics and relates to the poverty ratio in public sector banks, the positive impacts on poverty reduction.

According to Olaniyi Evans (2018), *Financial inclusion and agricultural commercialization in Ghana: an empirical investigation*, This paper investigated the relationship between agricultural commercial banks and farmer households in Ghana. The regression results reveal that the characteristics of FI stem from the agricultural commercial banks. The results of the endogenous switching regression show that financial inclusion significantly fosters agricultural commercialization. Specifically, financially included households sell 13.25% more output than their financially excluded counterparts. In terms of the counterfactual, financially excluded households would have sold 5.04% more output if they were to have access to financial services. Results from the Heckman Treatment Effect model confirm that financial inclusion promotes agricultural commercialization.

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According to Sonia_Afrin, Mohammed Ziaul_Haider, Md. Sariful_Islam (2017), *Impact of financial inclusion on technical efficiency of paddy farmers in Bangladesh*, This research investigated the impact of financial inclusion on the enhancement of paddy farmers' technical efficiency (TE). A non-monotonic relationship between TE and amount of credit was observed where TE was maximized at amount around 20,000 Bangladeshi Taka (USD255), a medium credit in terms of its amount. Performance is measured by gross income and return on assets (ROA) of these banks. To ensure the robustness of our results, we used six different measures of FI. These include credits for small and medium enterprises (SMEs), deposits for SMEs, number of ATMs, number of ATM services, number of credit cards, and new services. Thus, FI contributes to enhance the banks' performance. Therefore, the banks should devote more resources to increase FI as it benefits their profitability.

According to Fadi Hassan Shihadeh, Azzam (M.T), Hannon, JianGuan, Ihtisham ul Haq, Xiuhua Wang (2018), *Does Financial Inclusion Improve the Banks' Performance: Evidence from Jordan*. The article's purpose is to create an understanding of the limitations of financial inclusion from the perspective and experience of the elderly with vision impairment in Nigeria as well as highlight areas where support is needed to address digital exclusion. The results provide a profound insight into the nature of the challenges that visually impaired elderly have to face, especially with the financial management on computer-assisted platforms. The findings also reveal the fear and hope of this group about the rapid development of technology for financial management.

According to Sibel Yılmaz Türkmen, Gülcan Çağıl (2017), *Sustainable and Inclusive Finance in Turkey, Risk Management, Strategic Thinking and Leadership*, Individuals and companies should have equal opportunity on accessing markets and resources. Financial inclusion does not mean pushing access for the sake of access, and it certainly does not mean making everybody borrow. For inclusive economic development, inclusive finance is a necessary criteria. Growth becomes inclusive if it is supported by structural reforms. The main purpose of this chapter is to explore the terms of sustainable and inclusive finance and assess the underlying role in the developing countries especially in Turkey and to reveal the current situation and further possibilities.

According to Luiz Antonio Joia, Ricardo Paschoeto dos Santos (2019), *ICT and Financial Inclusion in the Brazilian Amazon*, The challenge of providing the infrastructure of public services in the less developed regions of Brazil has mobilized the Brazilian government in the quest for new and creative approaches that can reduce the major inter-regional disparities in the country. One of the initiatives implemented include access to the financial system, since, by way of example, such access is almost non-existent on Marajó Island in the state of Pará in the Brazilian Amazon. To change this reality, an innovative

e-government project is the itinerant bank branch installed in a boat, named Agência Barco, to serve the riverine populations of regions with low population density, transportation difficulties and limitations in access to information and communication technology (ICT). The results obtained led to the conclusion that Agência Barco has been able to attend the needs of access to financial products and services demanded by the population of Marajó Island, as well as identify opportunities for broadening financial education and inclusion through this e-government venture.

According to Mandira Sarma(2016), *Measuring Financial Inclusion for Asian Economies*, Asian economies are at different levels of economic and financial sector development. While Japan, Singapore, and the Republic of Korea belong to the high-income Organization for Economic Co-operation and Development (OECD) group of countries, on the other end of the wide spectrum are low-income countries that include Cambodia, Nepal, and Bangladesh. Within the middle-income countries of Asia, there are countries such as Malaysia and the Maldives that are far better off than Pakistan and India. While the literature on economic development has adequately discussed the link between financial sector development and economic development, there has not been much discussion of whether financial development implies financial inclusion. Financial inclusion can be defined as a process that ensures the ease of access, availability, and usage of the formal financial system for all members of an economy.

According to Md Aslam Mia, Lucia Dalla Pellegrina, Patrick Van Damme, Mahinda Wijesiri (2019), *Financial Inclusion, Deepening and Efficiency in Microfinance Programs: Evidence from Bangladesh*, The economic literature provides evidence that growth is associated with positive performance of the financial sector. This aspect is particularly important for developing countries. This study aims to investigate whether, in an environment of growing competition and regulation, the maintenance of their social mission may have led microfinance institutions (MFIs) to compromise their performance, in terms of efficient production of credit services. To this purpose, we use a two-stage approach to analyze the relationship between outreach and efficiency of MFIs in Bangladesh. The results show that most of the MFIs are operationally inefficient over the period, suggesting a considerable potential for future improvement. The results show that financial inclusion is positively associated with MFIs' efficiency, whereas the relationship between deepening and efficiency turns up negative, providing partial evidence in support of mission drift in the Bangladesh microfinance industry. This may be indicative of the fact that MFIs with stronger commercial objectives have expanded their business and their margins of efficiency to compete with other intermediaries. In contrast, the MFIs with a more intense social strategy may have suffered a decrease in their operating efficiency in order to maintain their social mission. Policy implications point

towards a greater degree of awareness on the part of the regulatory authorities of the consequences of imposing constraints on the operating mechanisms of the microfinance industry, such as interest rate caps. We also suggest that rules disciplining competition should not be uniform, but rather tailored to specific outreach indicators.

According to George Okello Candiya_Bongomin, John C. Munene, Joseph Mpeera_Ntayi, Charles Akol_Malinga (2019), *Collective action among rural poor : Does it enhance financial intermediation by banks for financial inclusion in developing economies?* The purpose of this paper is to establish the mediating role of collective action in the relationship between financial intermediation and financial inclusion of the poor in rural Uganda. The results revealed that collective action significantly mediates the relationship between financial intermediation and financial inclusion of the poor in rural Uganda. The findings further indicated that the mediated model had better model fit indices than the non-mediated model under SEM bootstrap. Furthermore, the results showed that both collective action and financial intermediation have significant and direct impacts on financial inclusion of the poor in rural Uganda. Therefore, the findings suggest that the presence of collective action boost financial intermediation for improved financial inclusion of the poor in rural Uganda.

According to Anarfo, E., Abor, J., Osei, K. and Gyeke-Dako, A. (2019), *Financial inclusion and financial sector development in Sub-Saharan Africa: a panel VAR approach*, The purpose of this paper is to investigate the dynamic link between financial inclusion and financial sector development (FSD) in Sub-Saharan Africa. The practical implication of this study is that financial inclusion should not only be pursued as a policy objective but it could also be an outcome variable of FSD and vice versa. This implies that African economies and governments in their effort to enhance financial inclusion, FSD can serve as a policy tool. This means that policies aimed at promoting financial inclusion will not impede FSD because the two are complementary. This suggests that we can achieve financial inclusion without sacrificing FSD and vice versa. This paper provides first empirical evidence of the link between financial inclusion and FSD from the Sub-Saharan Africa perspective using data sourced from World Development Indicators spanning from 1990 to 2014 for 48 Sub-Saharan African economies and 217 economies in the world for the full sample.

According to Shihadeh, F. (2018), *How individual's characteristics influence financial inclusion: evidence from MENAP*, This study aims to analyze the financial inclusion of individuals living in the Middle East, North African, Afghanistan and Pakistan (MENAP). It intends to show the influence of these individuals' characteristics on financial inclusion, using the World Bank Global Findex Database 2014 for 16 countries in the region. The results indicate that females and the poor are less likely to be included in financial systems, while

education level enhances financial inclusion. As disadvantaged people consider access to credit is important to improving their lives, the study finds that the poor are more likely to borrow for medical issues than for other needs. While Islam is the majority religion in the MENAP region, it is not considered a barrier to having a formal bank account. Furthermore, people in different income quintiles are more likely to use informal financial sources, while the educated are more likely to use formal ones.

According to Saviano, M., Nenci, L. and Caputo, F. (2017), *The financial gap for women in the MENA region: a systemic perspective*, This paper aims to investigate women's financial inclusion as a critical element for the competitiveness of the Middle East and North Africa (MENA) market for entrepreneurship and sustainable development of the region, as MENA financial institutions' loans to women-owned SMEs tend to be significantly lower than the share of women-owned SMEs in their target markets. Causes of under-serving this market are not very well studied. In accordance with this, the paper highlights the need of a more systemic approach and long-term vision to support a more extensive women financial inclusion in MENA regions.

According to Balasubramanian, S., Kuppusamy, T. and Natarajan, T. (2019), *Financial inclusion and land ownership status of women*, The study proves that there is a significant influence of women's land ownership status on their demand and usage of basic financial services. The results show that women who own land alone have a significant relationship for formal account ownership and formal savings but are deprived of formal and informal credit. The results find that women are more likely to avail of formal credit when they are backed by someone else in the family especially men. Irrespective of the wealth quintile to which women belong, they are deprived of credit if they do not own any land. The findings also show that women in higher wealth quintiles are more active in availing credit.

According to Mindra, R., Moya, M., Zuze, L. and Kodongo, O. (2017), *Financial self-efficacy: a determinant of financial inclusion*, The results suggest a strong positive and significant relationship between FSE and FI. The results further suggest that other variables which were controlled for, such as age and gender, had significant influence on an individual's usage of formal financial services.

According to Nilakantan, R., Iyengar, D. and Rao, S. (2019), *On operations and marketing in microfinance-backed enterprises: Structural embeddedness and enterprise viability*, Financial inclusion remains one of the most promising avenues to bring about development for the poorest segments of society. A substantial body of work has looked into financial inclusion, especially in terms of microfinance, but much of it has been anecdotal and case-based. There is little scholarship that broadly investigates how microfinance-funded businesses choose to use the loans, especially given the ever-present competition for resources that such businesses face regarding which investment priority to

pursue. In addition, the efficacy of these investments in terms of subsequent profitability remains unexplored, and so too does the influence of the entrepreneur's embeddedness in the local community. The paper aims to discuss these issues.

According to Asli Demirgüç-Kunt (2014), *Presidential Address: Financial Inclusion*, defines financial inclusion, discusses challenges involved in measuring it and why financial inclusion is important for reducing poverty and income inequality. Overall the role of policy is not financial inclusion since policies promoting credit for all at all cost can lead to greater financial and economic instability. The talk provides evidence-based examples of policies that can support healthy and sustainable financial inclusion.

According to Salman Ahmed Shaikh, Mohd Adib Ismail, Muhammad Hakimi Mohd. Shafiai, Abdul Ghafar Ismail, Shahida Shahimi (2016), *Role of Islamic Banking in Financial Inclusion: Prospects and Performance*. According to Global Financial Development Report 2014, the proportion of adult population holding bank accounts in 25 out of 48 Organization of Islamic Cooperation (OIC) member countries surveyed stands below 20%. Part of the reason is Muslims' voluntary exclusion of interest-based financial services. On average, 28% adults in the OIC countries hold a bank account at a formal financial institution. On the other hand, only 7.7% of the poorest 40% people in the OIC countries borrow from financial institutions.

According to James Copestake(2019), *Reframing Microfinance and Financial Inclusion Research: Case Studies and Synthesis*, This paper reflects on the evolution of microfinance and financial inclusion as arenas of research, focusing on its scope and on tensions arising from diverse disciplinary framings. It highlights how core research questions are situated on a broader canvas, and argues in favour of unruly case studies to complement and challenge systematic synthesis. The argument is illustrated with reference to material presented at the 2017 European Microfinance Platform conference in Portsmouth, UK, and Financial Inclusion in India conference in New Delhi.

According to Bożena Frączek(2019), *Relationships Between Financial Inclusion and Financial Stability and Economic Growth—The Opportunity or Threat for Monetary Policy?*The aim of the article is to conduct the considerations aiming at the identification and presentation of the role of financial inclusion in realization of main purposes of monetary policy - financial stability and economic growth. To achieve the aim of the paper, the reviewed articles and reports of international organizations as well as the case studies from many countries will be used. Financial inclusion is strongly connected with many other financial parameters and processes and influences the financial well-being of households, financial management in enterprises, financial stability and economy as a whole. This impact, although it is ambiguous, accompanies the monetary policy of central banks. Financial

inclusion may both increase as well as decrease the efficiency of the usage of the different tools and channels of central bank's monetary policy in achieving the most important purposes: financial stability and economic growth.

According to Jahel Queralt(2016), *A Human Right to Financial Inclusion*, argues that universal access to basic financial services can be defended as a human right. On the one hand, it defines the content of this right, which I will call a human right to financial inclusion. On the other hand, it builds on two standard human rights justifications to defend this right. First, it offers an interest-based argument emphasizing the value of this right to realize individual autonomy. Second, it elaborates a double linkage argument based on the supporting relationship between the proposed right and two other well-established human rights, namely, the right to an adequate standard of living and the right to development.

According to Uuriintuya Batsaikhan, Zsolt Darvas (2019), *Reconciling contradictory forces: financial inclusion of refugees and know-your-customer regulations*, providing access to financial services for asylum seekers and refugees is made difficult by your customer financial regulations adopted as part of efforts to tackle money laundering and terrorist financing activities. Difficulties in identifying asylum seekers and refugees further complicate the urgent necessity of opening simple bank accounts, which is a crucial step towards integration. We review certain financial inclusion initiatives and assess European Union banking regulations from the perspective of offering financial services to asylum seekers and refugees. We conduct a novel survey of banks in the European Union to shed light on banks' attitudes to the financial integration of refugees, their assessment of the relevant banking regulations and possible public - private partnerships to improve the financial integration process.

According to Durga P. Gautam(2019), *Do Remittances Promote Financial Inclusion?* In this essay, we examine whether remittances have provided additional avenues for policymakers to promote financial inclusion. Although some case studies have explored the potential link between remittances and households' demand for financial services, no cross-country analysis has yet been carried out for empirical tests. We use data from the World Bank Global Findex database (Demirguc-Kunt et al., The Global Findex Database 2011: measuring financial inclusion and the Fintech revolution. The World Bank, Washington, 2011) on financial inclusion for 107 remittance-receiving countries to examine whether remittances contribute to inclusive finance. Contrary to the findings from earlier case studies, our results show that remittance inflows have a significant negative impact on financial inclusion by reducing the demand for deposit accounts from formal financial institutions.

According to Saibal Ghosh, Manuela K. Günther(2018), *Financial Inclusion Through Public Works Program: Does Gender-Based Violence Make*

a Difference? The study investigates the impact of gender-related violence on financial inclusion. Exploiting the staggered rollout of a major public works program across Indian districts, we find evidence that households in states with gender-related violence are less likely to own a bank account, notwithstanding the fact that districts in these states were early implementers of the public works program. These findings are however, different after the government launched a massive program to promote universal financial inclusion.

3. Viet Nam Situation of Financial Inclusion

3.1. The general situation of accessing financial inclusion

The general situation of accessing FI is defined as follows:

Table 1. Access to financial services by gender in Vietnam and other countries

	Account ownership (**)	Saving	Borrowing	E-payment
Vietnam	1%	-4%	3%	-1%
Developing countries	9%	8%	6%	9%
High-income countries	2%	4%	3%	2%

[Source: Global Findex, 2017]

Note: The difference (%) = the percentage of men using the service - the percentage of women using the service

By age group: each age group usually has advantages in accessing different Financial Services. People aged 15 to 24 have better access to electronic payment services than the age group above 24 (28% compared to 21%) due to better access to information technology of young people. In both developed and developing countries, access to financial services for people aged over 25 is higher than for those aged 15 to 24 years. However, this is not true in the context of Vietnam for some financial services.

Table 2. Self-assess level of financial understanding of students

Group	Proportion
Having no knowledge about finance	47%
Have basic knowledge about finance	19%
Having advanced knowledge about finance	34%

[Source: Data from a survey of 435 students in Ho Chi Minh City, conducted by Nguyen Thi Hai Yen]

Table3. Level of financial understanding of adults

Standard	Mean	Max	Min	Std.
Basic financial understanding point	2.411	5	0	1.33
Advanced financial understanding point	2.711	7	0	2.25
Accumulated financial understanding point	5.12	12	0	3.3
Work experience	4.86	36	0	8.41
Level of financial independence	73.95	100	0	28.82

[Source: Data from a survey of 435 students in Ho Chi Minh City, conducted by Nguyen Thi Hai Yen]

Table 4. Level of understanding based on Vietnam’s criteria in 2017

Criteria	Knowledge	Attitude	Behavior	Understanding
By age group				
Under 30	3.73	2.92	5.11	11.76
From 30 ~60	3.66	3.05	5.43	12.13
Over 60	3.27	2.93	5.40	11.61
By income				
Under average	3.60	2.98	4.54	11.12
Over average	3.69	3.01	5.59	12.29
By area				
Urban	4.11	3.03	5.89	13.03
Rural	3.40	2.99	4.97	11.36
Education level				
Highschool	3.36	2.97	4.87	11.20
University	3.81	3.00	5.31	12.12
Post-graduate	3.86	3.06	5.98	12.89

[Source: Peter J. Morgan & Long Q. Trinh, 2017]

By region of residence: In Vietnam, the majority of the population is distributed in rural areas (64.9% of the total population). However, the growth rate of the agricultural sector has decreased in recent years. This has led to a reduction in the income and consumption of rural people, thus continuing to widen the gap between rural and urban areas, which means limiting access to financial services. Data from Table 5 shows that the percentage of Vietnamese in rural areas owning accounts at financial institutions and mobile money accounts is less than 50% of low-middle income countries. The percentage of people using electronic payment services is also much lower than that of low-middle income countries. However, the percentage of access to savings and borrowing services for people living in rural areas of Vietnam is higher than that of lower middle-income countries.

Table 5. Access to financial services among adults in rural areas of Vietnam and other countries

	Account ownership	Saving	Borrowing	E-payment
Vietnam	25%	54%	51%	19%
Low-middle income countries	58%	38%	43%	27%
Eastern Asia and Pacific	69%	50%	47%	55%
Developing countries	62%	42%	44%	41%
High-income countries	94%	71%	61%	90%

[Source: Global Findex, 2017]

The data in Table 6 shows that this difference in access to financial services is not only true in Vietnam, but also in developed and developing countries for all services surveyed.

Table 6. Differences in access to financial services by employment in Vietnam and other countries

	Account ownership (**)	Saving	Borrowing	E-payment
Vietnam	15%	12%	14%	13%
Developing countries	16%	20%	17%	20%
High-income countries	6%	17%	19%	10%

[Source: Global Findex, 2017]

By education level: the level of access to financial services of people in developed countries having the same educational level is higher than that in developing countries and Vietnam. However, this difference between developing countries and Vietnam is not obvious; while the percentage of people with the same education level in Vietnam having a bank account and electronic payment is quite low compared to developing countries, the percentage of people with access to savings and borrowing services in Vietnam is higher than that of developing countries.

By means of access to financial services via the internet

Table 7. The percentage of adults using Vietnam's online payment service compared to other regional countries in 2017

Criteria	Vietnam	Eastern Asia and Pacific countries
Use the internet to pay or buy online	21%	41%
Use phone to pay	2%	12%
Use phone or internet to access account	9%	33%
Use digital payment	23%	62%
Own mobile money account	3%	N/A

[Source: Global Findex, 2017]

Bylevel of access to bank accounts : Since 2016, the State Bank of Vietnam has cooperated with the banks in other countries to develop a national strategy on financial inclusion based on a general access. Some of the key contents of this strategy include replaing government payment programs with digital services and platforms, providing financial services to rural areas and ethnic minorities, where the poverty ratio is higher than the national average, increasing consumer protection and disseminating financial knowledge to help consumers be better equipped with modern financial services.

Transaction accounts are the first step in the process of financial and financial inclusion universalization. It is the simplest, most accessible and most frequently used financial service of any financial services. However, according to Global Findex, as of 2017, only 30.8% of adults (over 15 years old) have a transaction account at a formal financial institution in Vietnam. This is much lower than the world average of 68.5% and in the Asia Pacific region 73.7%. Despite its large population, the percentage of financial universalization in Vietnam is still low, making Vietnam one of the top 25 countries to prioritize financial inclusion in the Universal Financial Access (UFA) initiative of World Bank until 2020. The goal of this initiative is to help 2 billion people in the world who do not use banking services have access to the formal financial system. People can then use the services they need such as savings, payments, loans and insurance.

3.2. The situation of physical infrastructure

In Vietnam, electricity and road networks are well-equipped and convenient for financial inclusion development. According to the report of Electricity of Vietnam (EVN), by the end of 2018, 100% of communes had electricity, the number of households using electricity was 99.37%, of which the number of rural households having electricity reached 99.05%. According to the survey data of the 2016 Rural, Agricultural and Fishery Census of the General Statistics Office, the rural transport system was increasingly clear. As of July 1st, 2016, there were 8,927 communes having roads connecting the Communal People's Committee to the District People's Committee, accounting for 99.4% of the total number of communes, an increase of 0.8 percentage points compared to the proportion in 2011; nearly 74.9 thousand villages had roads connected to the Communal People's Committee, accounting for 93.7% of the total number of villages, an increase of 4.1 percentage points. By 2016, 37 provinces and cities directly under the Central Government reached 100% of the communes having roads from the Communal People's Committee to the District People's Committee around the year. According to the digital media report in Vietnam in 2019, Vietnam's population reached approximately 97 million with 55% of the population using smartphones, 66% of the population using the internet, 48% using social networks.

Number of transaction branches and ATMs: According to the statistics of the World Bank, in 2018, the number of ATMs in Vietnam was 24 machines/100,000 adults and tended to increase over the years. As of the fourth quarter of 2018, there were over 18,280 active ATMs, an increase of more than 4% compared to the end of 2017. By the end of the first quarter of 2019, there were over 18,000 ATMs. The percentage of banking transaction places in Vietnam in 2018 was nearly 4 points/100,000 adults, an increase of 0.5 points compared to 2017. The development of the number of ATMs and banking transaction places is a condition for promoting cashless transactions, encouraging people to use the services of formal financial institutions such as savings, borrowing, transferring and receiving money. Especially, the expansion of transaction points and ATMs has great benefits in assisting people in rural, mountainous and island areas to have access to financial services and products. Despite this, incentivizing people in these areas to use financial services remains difficult, due to apprehension, cash habits, and limited facilities.

3.3. The situation of microfinance development scheme

Table 8. Implementation plan of the Microfinance Development Project

Period of 2011 – 2015	Period of 2016 - 2020
<ul style="list-style-type: none"> - Developing documents related to the establishment, license to operate, supervision of microfinance safety - Supporting microfinance institutions: training human resources, forming a microfinance database - Establishing of Microfinance Association - Management solutions for microfinance activities of formal and semi-formal institutions. - Researching and proposing the issuance of appropriate tax and fee policies to support the development of microfinance activities. - Promulgating financial mechanisms, accounting regimes suitable for microfinance activities. 	<ul style="list-style-type: none"> - Organizational structure: Allowing to diversify types of operation, including joint-stock companies, to create conditions for microfinance institutions to access capital of all economic sectors. - Products and services: Encourage microfinance institutions to expand products and services in accordance with their financial capacity - Distribution channel: Strengthening the connection of other types of credit institution with microfinance institutions, by making the most of the existing network of banks and financial companies to provide microfinance products. - Legal corridor: Continue to update and complete - Proposing a solution to complete the preferential credit mechanism to

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<p>- Researching and issuing appropriate regulations for micro-insurance activities.</p>	<p>ensure the right service to the poor and other policy beneficiaries.</p> <p>- Acting as a counsellor for the Government on focusing capital sources for microfinance.</p> <p>- Proposing policies and creating conditions for social-political organizations to participate in the use of preferential credit capital sources for microfinance activities.</p>
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[Source: Decision No. 2195/QĐ-TTg dated December 6th, 2011, the Prime Minister]

Along with the inevitable trend of applying technology and digitization in the field of banking - financial services globally, the application of Fintech in microfinance operations is no longer an option but a necessity if Microfinance institutions want to survive and thrive in an increasingly connected digital world with increasingly collected, shared and exploited data. Therefore, one of the important orientations is that Microfinance institutions have to enhance the application of Fintech in their operations to easily access customers, provide services to customers and improve improve the efficiency of operations sustainably.

3.4. The current situation of applying information technology and enhancing FI at some banks

Techcombank: In 2018, Techcombank continued to pioneer in the field of digitizing financial services and banking products as it focused on developing IT along with financial technology to become a 24/7 bank. Techcombank provides customers with the most basic services from payment, money transfer, savings and credit card to life insurance products, connecting money transfer to pay for securities and investment. By the end of 2018, there were 1.5 million regular customers using digital banking services at Techcombank, increasing by 90% compared to the same period in 2017. Recognizing the increasing need to experience digital banking in Vietnam, Techcombank demonstrates its commitment by working with professional partners in the Fintech industry, investing in a new digital platform to bring customers the best quality. Techcombank also knows that in the era of 4.0 industrial revolution, security is a special concern, Techcombank has therefore maintained both information security certifications, ISO27001:2013 and PCI DSS 3.2. Among banks actively applying technology, Techcombank has pioneered in the market to invest in several new features on Internet banking and Mobile banking. In addition, Techcombank is also known for many innovative solutions such as Mobile

Banking, JCB Card & Mobile POS... Or the integration of payment features into online transaction platforms, prominent as Internet Banking, which allows customers to place automatic payment orders from making top up to paying bills regularly and on time. Furthermore, Techcombank also develops an online card opening service to facilitate people who are not able to go to the bank. This partly motivates everyone to own a bank account hence developing financial inclusion... Besides, there are more than 20 e-wallets in Vietnam market. In which there are some e-wallet brands associated with Techcombank as MOMO e-wallet; VTC Pay wallet; Bankplus wallet... With these connections, customers will be able to transfer and receive money quickly, as well as make online payment activities easy. Just with an account on e-wallet and use Techcombank's services, you can link in a few simple steps. As long as you are Techcombank customers, using domestic debit cards, international debit cards and using F@st i-bank internet banking service, you can link to e-wallets easily.

Apart from the financial inclusion solutions to meet all financial needs of enterprises from credit, transactions, cash flow management... Techcombank also offers a number of outstanding incentives for enterprises participating in the energy audit:

- + Credit package with preferential interest rate, tenor up to 24 months, flexible payment methods and collaterals, quick procedure
- + Enterprises have the opportunity to receive a special support package from the Green Credit Trust Fund (GCTF) funded by the Swiss Government with non-refundable financial support and credit guarantees for small and medium-sized enterprises to make new investment in or use new technology lines

Understanding market and customer demands, Techcombank identified one of the indispensable requirements of personal financial services is to arrange for customers with insurance to implement financial plans if risks occur, in order to meet increasingly diversified financial needs of the customers. Previously, customers came to the bank only to implement accumulation and investment plans, but now they also have added risk prevention.

Currently, Techcombank is the market leader in the distribution of life insurance products via banks (bancassurance), accounting for 26-30% of the market on this distribution channel. Techcombank and Manulife Vietnam signed a 15-year exclusive insurance cooperation agreement, which allows Manulife Vietnam to provide life insurance solutions to all Techcombank customers. Customers only need to come to a single transaction point in Techcombank's extensive network of branches to be consulted and served from the beginning to the end for insurance needs. The bank also developed an insurance information lookup utility on F@st Mobile app to help customers access and look up insurance information easily.

There are also mobile applications that make it easier for customers to make payments, transfer money, save money, etc, such as Fast mobile, Fast i-banking, 24/7 money transfer service, Cardless withdrawal service...

TP bank: with a pioneering orientation in the field of digital banking, TPBank always strives to bring the leading financial and banking services in digital technology such as constantly launching innovative products with outstanding and unique features to meet the needs of customers, especially young customers who love technology. Products from TPBank that help customers significantly reduce transaction time are issuing ATM cards immediately at LiveBank, withdrawing money with fingerprint at LiveBank, withdrawing money with QR Code on both LiveBank and ATM, allowing customer authentication quickly by voice without having to answer security questions when making calls to the switchboard... TPBank is also one of the three leading banks in the application of chip card technology to combat data theft and counterfeiting of bank card accounts. Electronic banking is a payment channel that TPBank is interested in. 3-4 years ago, TPBank integrated mobile banking and internet banking into one application to implement on many devices and screens. Every bank has similar services to mobile banking and internet banking, but TPBank wants to be good and serve customers more, so it has to conduct a friendly application with quick payment within a few seconds. These broadband connection systems also allow the bank to speed up processing time and duration for each transaction. Besides, TPBank also has TPBank mPOS, a solution for card payment solution anywhere; TPBank mPOS Plus accepts card payments such as ATM, Visa, Master Card, running independently by 3G SIM or WiFi; TPBank Quickpay is an application for mobile phone and tablets running on iOS and Android operating systems that makes payment and money transfer quick and easy via QR code (Quick Response). Tpbank released two applications, namely Savy and Quickpay with unique and friendly features, which have created a great attraction for users. With Savy - the first mobile savings app in Vietnam, users can start saving with a small deposit of only 30,000 VND. No matter which bank account you own, you can send money to Savy with 0 charges for all transactions. With just Savy on your phone, you can perform all the steps from registering information, choosing savings type, depositing or withdrawing... without paying any fees or taking time to travel. Installing the TPBank QuickPay app on your phone, users will own a high-tech wallet; without having to carry a wallet or bank card and with just one QR code scan at supermarkets, shops... you can make payments. Tpbank also implemented e-bank to create favorable conditions for customers to use.

ABBank: An Binh Commercial Joint Stock Bank (ABBANK) implemented the fundamental technology of IT infrastructure, henceforth Microsoft Vietnam Co., Ltd. and ABBANK officially announced the signing of Enterprise Agreement and strategic cooperation on using technology and copyright of

Microsoft software at ABBANK. The signing aims to standardize the operation of ABBANK in accordance with international standards, and at the same time bring the added value that ABBANK's customers enjoy from the services provided by ABBANK thanks to the investment in new technology. In the operation of a bank, the IT system plays a significantly important role in the operation and development of value-added services and the Card is one of the core products/services. Proactively preventing as well as preparing training plans and activities in advance for IT and card risks will minimize the risk of events. Following the instruction of the State Bank and ABBANK's Board of Directors on ensuring the continuous operation of the IT system against technological risks in the event of a disaster, with a great deal of efforts, the Banking Technology sector and Card center - Individual Customers sector have conducted practises with several important contents. Accordingly, the two units participated in the implementation of rehearsing IT system recovery after the disaster with Core Banking system (T24), the enterprise service bus (ESB) system and Card system (Smartvista, POS, ATM), performing the system activation at DR to examine the operational status of the features in the system, ensuring that the system operated stably and was able to replace the current operated system at DR in case of a disaster. All the activities aim at ensuring the continuous and safe business operation of the bank, serving the customers with the highest quality. The SWIFT officially announced that ABBANK is a member of the Global Payment Innovation Initiative Project - SWIFT GPI. Being a member of the SWIFT GPI project means that ABBANK has been enrolled in a community which always requires constant learning, updating knowledge and new technologies to improve service quality in compliance with the most modern standards, bringing about added value to customers and the project members themselves. This is an important step for ABBANK in continuously developing services with high added value, aiming at the benefits of customers. ABBANK officially launched the issuance of domestic debit chip cards of ABBANK YOUcard, which integrates both contact and contactless technologies, giving customers the experience of using new cards that is extremely convenient and safe. Chip EMV technology integrated on ABBANK YOUcard is the safest and most secure technology, meeting international standards and the State Bank's regulations. ABBANK is honored to be one of the first seven banks in Vietnam to be selected by the State Bank and the National Payment Corporation of Vietnam (Napas) to comply the policy of implementing the conversion of Domestic Magnetic Card to Domestic Chip Card according to VCCS standard issued by the State Bank.

Eximbank: The use and application of IT and Fintech to develop financial inclusion: In 2018, Eximbank mobilized resources to put the new Core Banking project into operation. With this new technology, a number of processes and product characteristics were changed and updated so that customers could experience the best services, reducing manual operations for tellers at the counter and officials at the back office department. Some processes were

centralized at the Head Office, such as international money transfer and receipt. The centralized processing helped to reduce various stages at the business unit while making the most of the new Fincore system, significantly reducing the infrastructure investment costs for the Citad system. Centralization was a part of the operational strategy combined with the bank's new strategy, with a focus on the specialization and the operation on the IT platform. At the same time, Eximbank also developed a new Finacle core system to meet the bank's new business requirements. Eximbank developed the banking services on the basis of advanced technology, such as developing value-added services and utilities on Internet banking or Mobile banking for receiving and transferring promptly through account numbers with 42 banks as well as developing cashless payment utilities through smart electronic devices. For remittance payment service, Eximbank implemented the Payment API connection model 24/7 to bring the highest business efficiency without having to spend a lot of human resources as well as operating costs. Therefore, customers could receive overseas remittance through their account or card quickly and safely. The successful operation of the new core banking, Infosys Finacle Core Banking, helps Eximbank make a breakthrough in banking service exploitation, creating competitive advantages and increasing business efficiency. In addition, Mobile Banking and Internet Banking help make transactions easier, helping people have access to financial services.

Maritime Bank: The 4.0 Industrial Revolution is bringing new opportunities and new challenges for the accounting-auditing field. The use of an accounting software with intelligent connectivity is indispensable, and this will be the "key" to support accountants and financiers in data processing, operations related to tax authorities, banks ... Thereby MSB cooperated with MISA Company to offer a system connection solution. This is a solution that helps accountants shorten the time and effort when performing money transfer, direct query on MISA SME.NET 2017. After doing transactions at banks or on internet banking, enterprises must account many documents on accounting management software, which causes loss of time and may lead to errors. But now, accountants only need to work on an accounting software which is fully integrated with utilities such as payment, automatic accounting of money transferring orders into the accounting system, querying account information... helping accountants save time for bank transaction, accounting the documents, collate the deposit amount with the passbook. In Vietnam, the 4.0 technology atmosphere spreads to almost every aspect of life. Particularly in banking and finance, payment gateway, e-wallet, Digital Banking or Internet Banking are becoming more and more familiar to users. With the presence of companies specializing in digital payment and supplying e-wallets, recently, banks have rapidly joined the digital race. Not only have the industry giants caught up with the trend, but the group of joint-stock commercial banks has also responded instantly, including Maritime Bank. Recently, the bank updated an innovative payment solution on the mobile application Samsung Pay for

Maritime Bank Mastercard cardholders. Maritime Bank issued a securities application on mobile phones: MS-Mobile. The partner who developed the MS-Mobile application with MSBS was the Financial Software Solution Joint Stock Company (FSS). FSS is a software company built by a team of experienced experts in the field of securities software, with the orientation of providing software solutions and services for the banking and financial sector in Vietnam and worldwide. The launch of MS-Mobile application meets the future trend of online transactions on mobile devices, showing MSBS's commitment in conducting advanced information technology application methods to serve customers and investors in a professional and effective manner, contributing to the overall development of the market. Maritime Bank updated its cashless payment method, Samsung Pay. Accordingly, when shopping, instead of giving the card and waiting for the seller to complete the payment, the cardholders just need to tap Samsung phone with pre-installed Samsung Pay application into the point of sale (POS) machine and you can pay bills at thousands of shopping places like supermarkets, restaurants, hotels, or shopping malls... Apart from convenient payment apps, the bank also did not ignore the benefits of the barcode matrix (Matrix-barcode or QR Code) when it became one of the banks applying new technology in payment to increase value for customers. By connecting simultaneously with the two largest payment gateways in Vietnam, VNPAY and Payoo, Maritime Bank customers can conveniently shop with QR codes at nearly 4,500 transaction locations and hundreds of online sales websites such as Lotte Mart, B's mart, ThaiExpress, Hotpot Story, Hong Lam, Royal Tea, Klever fruits, Big Green, Noi Bai taxis, ABC taxis,... Maritime Bank promoted credit to gain benefits for the bank as well as its users. It continuously launched new products and programs to meet the needs of both corporate and individual customers. For small and medium-sized enterprise customers, MSB provided inclusive credit solutions with simple procedures, quick and suitable to the capital needs of customers. It only takes up to 3 days for credit limit approval, enterprises will have available capital support throughout the year up to 10 billion, up to 140% of the collateral value. At times when enterprises have high demand for seasonal capital, MSB is also willing to finance up to VND 4 billion without guaranteed assets. Business transactions are also supported with free/reduced fee packages up to 100% of transaction fees, account management, internet banking... In an effort to meet the diverse needs of customers, the credit growth in the SME sector in 2018 reached 70% compared to 2017. For individual customers, MSB pioneeringly introduced the new products, promptly meeting the need for capital of customers, for example, the main product M-housing with special privileges for customers such as preferential interest rates from 6.99%/year, loan limit up to VND 20 billion, and disbursement within 16 hours... Along with M-housing, real estate loan products were also positively responded by the market. Credit growth in the individual customer sector reached 31%.

PVCombank: Pvcombank has always been an important component in the development of the economy and financial inclusion. The process of participation is becoming more and more evident when the bank is currently conducting an IT system to meet the increasing demand for payment of public services. Being aware of that trend, over the past time, PVcomBank has proactively invested in technological infrastructure and connected to Tax database, Electricity database, Water database... and implemented payment via electronic transactions channels such as Mobile Banking, Internet Banking... providing customers with the initiative in the process of paying taxes, electricity, water bills... In the past 2 years, cashless and contactless payment technologies had been strongly applied in Vietnam. Keeping up with this trend, Pvcombank invested in the technology system of Contactless payment card with international card organization MasterCard; implemented contactless payment channel with major partners: VNPay, SamSungPay... in order to diversify contactless payment methods to bring customers a distance-free experience; promoted the model of linking major partner chains in the retail sector to provide flexible payment solutions to individual customers such as Contactless MasterCard, QR Code integrated into Mobile Banking, upgrading electronic authentication in payment on Internet Banking... Besides that, the bank also integrated electronic payment technology with credit products to meet the demand for consuming and paying of customers; controlled customer experience to improve service quality and provided more comprehensive electronic services to customers based on new technology platform.

Being aware that the important thing in the development of digital banking is customer protection, Pvcombank has concentrated on improving the security infrastructure and applied high technology in the process of authenticating customers' transactions. At the same time, PVcomBank has taken necessary steps to make the digital bank target customer experience, that is optimizing electronic transaction processes to conduct transactions from customers; implementing application solutions of conducting electronic transactions to provide customers with the initiative and shorten over-the-counter transaction time, with the goal that customers will no longer need to go to banks to make transaction; building a partner system associated with its services and products to meet the customers' electronic transaction needs; providing online financial solutions suitable for different types of customers.

With the vision and strategy that are always in line with the needs of the market, in 2018, PVcomBank continuously implemented business programs to provide customers with financial inclusion solutions, accompanying customers in all activities such as preferential credit package "Available capital"; Unsecured credit package for customers buying holiday at FLC Holiday; Interest rate incentive program for flexible car loan products; Products funding construction contractors at PVcomBank; Top up product; Launching Middle-

aged Deposits, Lighting-up-faith deposits; Cooperating with major partners such as Vietnam Airline, Vingroup to launch incentive programs for customers using PVcomBank MasterCard credit card... Furthermore, PVcomBank made great strides in modernizing its technology and improving quality of service. A series of products based on modern technology have been well received by businesses and the public such as: Samsung Pay connection, e-wallet connection, QR-CODE payment, mobile card reader MPOS, ATM solutions without cards...

Vietcombank: IT is a field of special interest of Vietcombank Board of Directors. The requirements placed on the IT platform are increasingly high because customers themselves also make a great deal of demands of enhancing security, information security as well as application of new technologies. In the 4.0 era, cashless payment methods are becoming more and more common because of the convenience for users. One of the methods that a lot of people appreciate is paying via QR code. With outstanding advantages such as quick and easy payment; extensive payment acceptance and account information security, QR Code is becoming the top choice in payment transactions. Grasping this trend, Vietcombank has started offering QR code payment services since October 2018. With the desire to further improve the convenience of customers, since May 4th, 2019, Vietcombank has continued to upgrade and expand the inter-bank QRCode payment service. This service allows customers to use mobile application of units which combine QRCode payment service with VNPAY to make payment for goods and services bills at the payment points of accepting units developed by Vietcombank.

Vietcombank is a pioneer in cooperating with FinTech companies, card accepting units, business partners and government agencies. A firm and integrated technology platform is essential for developing a digital banking strategy. Vietcombank is also making efforts to implement new platforms and tools to support digital retail banking. Vietcombank and PwC Consulting Vietnam have started the Digital Banking Conversion project at Vietcombank. This project is one of the key digitalization projects that Vietcombank has been implementing to serve the purpose of closed digital transformation strategy. The project is expected to help Vietcombank promote the strong development of digital-based innovative business models, in order to achieve important business goals and bring satisfaction to customers through its digital experience using data and technologies platform. Furthermore, with the digital transaction space Digital Lab and large-scale digital conversion project, customers can experience a self-service transaction area right inside the bank. Vietcombank Digital Lab is part of the overall project of building a modern branch model - Smart branch-in accordance with the digital banking development strategy of Vietcombank, which describes Vietcombank's large investment in technology and its ability to apply digital technologies in providing banking services. Their top goal is customer satisfaction when

experiencing the same services across all banking channels, from the traditional to the modern ones.

Enhancing financial inclusion and developing e-payment in the coming period, it is essential to pay attention to the fact that the trend of banking service digitalization and being customer-centric is getting more and more popular, and consumer behavior has a dramatic change from limited interaction in an off-line environment, face-to-face meeting with bank staff to an online transaction environment without meeting, accessing and using banking services continuously, anytime, anywhere on several types mobile device. Over the years, Vietcombank has been interested in promoting the development of technology in accordance with the international standards, leading the development of cashless financial services such as cards, money transfers via the internet and smartphones with large card issuance sales and a wide network of card-accepting units. Developing cashless services, Vietcombank implemented the service of paying electricity bills for households and other social services. Payment with QR codes is becoming more and more popular due to its utility and security features. Vietcombank also integrated the payment by QR code into two mobile banking applications, VCB-Mobile B@nking and VCBPAY. Both of these applications have many smart payment functions, meeting the needs of customers, besides QRPay helps the bank reduce investment costs for ATM, POS and expanding its network of payment services.

Agribank: Agribank is the leading bank in investing in Agriculture and rural areas, the sector that contributes most positively to the economy of Vietnam but is also one of the areas with high operating costs due to the number of small loans, large geographic area and great risks caused by natural disasters, climate change and other environmental incidents. In the context of the 7th APEC Forum on Financial Inclusion in 2017, with the theme "Finance for Agriculture and Rural Development", (one of four cooperative priorities within framework of the APEC 2017 Finance Ministers cooperation progress), Vice Chairman of Agribank, Pham Duc An delivered a speech about the credit policy of the State and Agribank for agriculture. Agricultural production in Vietnam has not yet formed highly competitive agricultural value chains, large-scale concentrated agricultural production areas; increasingly serious impacts of climate change, natural disasters, floods, droughts, saline intrusion, environmental incidents, unsafe production; the application of modern production technology has not been popular, leading to high production costs, low competitiveness, affecting the ability to repay bank debts; regional and subregional planning in service of projects, loan plans in some places are still not stable and practical; the linked value chain model, high technology applications in agriculture without synchronized and drastic coordination; processing, storage and consumption of products face several difficulties, agricultural products price are often suppressed, affecting the repayment

sources of borrowers; the control of inputs (breeds, food, pesticides ...) still faces a lot of challenges.

Agribank cooperated with ABIC Insurance Company to successfully implement the credit insurance program for nearly 1.9 million farmers to borrow loans, the average compensation payment amount is over 300 billion a year. Aiming to diversify its products and services to expand its scope, Agribank focused and improved service quality, especially for customers who are farmers. In 2017, Agribank was focusing on promoting research and development of new products and services based on high technology platforms. Conductin E-Banking project with the purpose of building a complete multi-channel service platform, through which customers could use banking services through many different channels. As of 2018, according to the direct notice from Agribank, 200 utility banking products and services were provided, including the outstanding products such as: Agribank E-Mobile Banking application; Standard EMV Chip Card, Electronic Tax Payment, Cross-Border Payment or Agricultural Lending Service.

MB: Leading the digital banking feature with the application of App - MB Bank and new business models in cooperation with Viettel (Viettel Pay), Vingroup (issuing MB - Vin ID co-branded card), cooperating with Bordier&Cie Singapore to implement advanced science and technology services attracting a large number of customers interested in using, contributing to increase the total net interest income from service activities by 78.2%. MB decided to cooperate with IBM to implement an IT transformation project for 5 years, demonstrating the strong determination of the Board of Directors of the bank. Accordingly, MB is conducting various solutions to improve technology capacity to ensure high availability rate of core systems, remarkably implementing numerous technology applications to all transactions and stages of process to ensure business requirements and management requirements. In addition, the completion of changing the new identity image for the whole network helps MB have a new youthful, dynamic look and get closer to a large number of domestic and foreign customers. The organizational model was completed in the direction of separating management and administration, but concentrating on the areas of evaluation - approval - operation - accounting - finance, along with the consolidation of personnel at all levels to comply with the Strategy and the regulations of law, increasing objectivity and controlling risks, freeing up sales force, saving system resources.

Inheriting and promoting the obtained achievements, the bank continued to synchronously implement 04 strategic shifts (Digital Banking, Enhancing Client Relations, Outstanding Risk Management, Improving operational efficiency of the member companies) along with business solutions (Inclusive implementation of community banks and SME CARE; Retail and service development; Inclusive renovation of transaction offices,...); concentrated on methods that increase revenue, productivity, at the same time, well managed

operating expenses... MB continues to maintain high service fee growth next year by strengthening traditional business models while increasing investment in developing new business models such as bancassurance, digital bank and transaction bank, investment banking and asset management,...Apart from the efforts to promote business activities, the bank always complies with the regulations of the State Bank and the Government with the guideline as "the rule of law; focus on strengthening the organization, the system of regulations and internal policies towards enhancing high-level governance and supervision with effective support; at the same time, paying attention to the training and retraining to develop a qualified contingent of officers at all levels for the present and future MB; promoting cross-selling activities within the group and developing modern financial banking products and services to bring more added value to customers and shareholders.

Co-op Banking: E-banking (CF-eBank) is a modern banking management system that allows People's Credit Funds (PCFs) to perform electronic banking transactions remotely on the basis of modern technology of Co-op Bank in a safe, fast and convenient manner. The PCFs participate in the project through the Co-op Bank to perform quick money transfers to members, customers in all provinces, cities and banks across the country safely, quickly with reasonable costs and no expensive investment. The potential of the system after it is put into operation is significantly huge, contributing effectively to the development of PCFs and Co-op Bank in many aspects such as meeting the needs of members and customers in rural areas where it is difficult to access modern banking services; modern and safe services contributing to the benefits and enhancing the prestige of PCFs' position. Expanding the market, attracting corporation and individual customers to open deposit accounts and conduct money transfers, supporting the development of other services, contributing to the development of cashless payment services in rural areas; strengthening the linkage in the system between PCFs and the Co-op Bank. Helping the PCFs to make the best use of their available capital, the bank has improved the work of capital balancing, the cashless payment work; improved information quality accurately and timely for capital management and administration between the Co-op Bank and PCFs; and the opportunity to expand modern banking services is the key to change the traditional banking business mindset, creating the most favorable conditions for all types of customers. PCFs implemented the service of transferring money via E-banking (CF - eBank): 96 units (As of August 7th, 2013), benefits of customers such as simple, quick and convenient procedures of money transferring/receiving. Customers are consulted attentively, save money and time, and are ensured to receive money in the fastest way: after 10 minutes for transactions in the system of Co-op Bank/PCF joining the money transfer network.

4. Preliminary assessment of existing issues

Firstly, the subjects supplying financial products and services

The current distribution network of products and services is mainly based on the traditional organization, through the presence of branches, transaction offices and transaction points. Application of modern information technology in banking activities in general and in providing products and services in particular of credit institutions is not synchronous. Although the security, safety and continuous operation of information technology (IT) systems have been emphasized, they are still not comprehensive. The cost of IT infrastructure investment is remarkably expensive, so there are great difficulties in investing and developing synchronously technical infrastructure, especially for small-sized credit institutions with limited financial and human resources; a lot of new banking transactions generated with high complexity leading to changes in organizational structure requirements and extended implementation time; IT human resources are limited in quantity as well as quality and have not caught up with the rapid change of technology.

The network expansion of commercial banks faces major obstacles. Firstly, in terms of costs: the estimated revenue is not enough to cover the costs of operating a branch/transaction office in rural areas, remote areas with low population density; Secondly, regarding the equity capital: commercial banks wishing to open more branches/transaction offices must meet the minimum requirements on charter capital. Meanwhile, several banks are currently in the process of restructuring with capital raising requirements to meet new capital standards. Non-bank credit institutions such as financial companies, financial leasing companies, and consumer finance companies have been established and operated for a long time with the role of providing services to the market segments that commercial banks cannot reach. However, with a small capital scale, weak operational capacity, and some consumer finance companies having highlending interest rates, these institutions have not been able to fulfill the expected role of service delivery. Restructuring and raising capital are also a problem faced by various financial and financial leasing companies, whereby the expansion of the network is also limited.

Secondly, financial products and services

Financial products and services are not diversified and do not meet the needs of individual and corporate customer segments, especially in the agriculture and rural areas. Products are mainly focused on credit, while savings and payment services are inadequate and do not meet the needs of rural people. There are not many products of credit for agriculture and rural areas that are suitable for the needs and seasonality of agricultural activities. People still have to borrow from the informal sector to fulfill their needs (when the bank's loan range is not enough to meet the production plan) or to timely repay the bank (due to the shorter loan period than expected). The promotion of financial products and services in rural, remote and isolated areas is limited. Commercial banks have not really focused on explaining, introducing to

customers existing programs and incentive policies in a manner that is consistent with psychological characteristics and cognitive levels of rural residents. Banking transaction procedures are still complicated, and sometimes not convenient for customers, even becoming a barrier to the access to banking services of some particular customers, especially customers in rural, remote areas with low level of knowledge. The quality of some services has not met the requirements. Service fees need to be more transparent.

Thirdly, the financial infrastructure environment

Payment infrastructure: building an electronic automated clearing house (ACH) for low-value retail transactions with slow progressing time, reducing the effectiveness of interbank retail payment transactions, personal payment services and methods are not actually convenient. The payment infrastructure such as POS/ATM system is unevenly developed and distributed, concentrated mainly in urban areas and not widely developed in rural areas, requiring large investment capital but having low efficiency. There are still issues about safety, security and confidentiality of customer information and data when providing payment card services and electronic financial services. The connection between the payment systems is not significant.

Credit information system: development of private credit information organizations is limited

Information and telecommunication infrastructures, especially those serving the search and retrieval of customer information: there is not yet a national database of population, making it difficult in collecting information from utility service organizations such as electricity, water, telecommunications... People without or with little information have difficulties in receiving credit services from credit institutions.

Fourthly, the subjects using financial products and services

Small and medium-sized enterprises have low business and production efficiency and profit margins. The level of financial education and access to information technology of the residents, especially rural residents, is still low. Poor financial knowledge makes people reluctant to use official financial services. Cash consumption habit is quite common in both urban and rural areas. Online payment activities associated with e-commerce have increased but just a little.

Fifthly, the legal environment

The legal environment for the provision of financial-banking products and services has made significant progress through the completion of the legal document system since the adoption of two new banking laws, the State Bank Law and the Law on Credit Institutions in 2010. The current law does not provide guidelines for the implementation of the correspondent bank model, which allows non-bank organizations such as grocery stores, gas stations, and post offices... act as an agent for banks to provide products to customers of the bank. The current law also does not have regulations on a basic form of

account, which functions as a payment deposit account but is used for those who really need it with simple features such as receiving/depositing and withdrawing money, paying utility bills. The current legal framework still lacks guiding regulations for the provision of new and modern services of credit institutions and financial technology organizations. These innovative technologies are being developed rapidly to target the subjects of financial inclusion that were previously excluded, such as the provision of financial services via e-wallets and electronic accounts... At the same time, with the rapid development of new technologies and ways of distribution, new risks also appear and entail compliance with money laundering prevention and terrorist financing. The law on banking services still lacks regulations adjusting a number of methods of providing banking services such as cross-border, using services in foreign countries, and presence of natural persons... The current regulations on banking services mostly concentrate on adjusting the provision of banking services through commercial presence but there are no regulations adjusting the provision of banking services through other methods. Meanwhile, today, with the development of information technology and telecommunications, via the internet and e-commerce, foreign service providers can completely provide banking services to customers in Vietnam and vice versa without establishing a commercial presence. On the other hand, when there are no adjustment regulations, it is difficult for the State Bank to well perform the role of inspection and supervision for these new methods of service provision. The legal corridor still lacks the timeliness, the coordination among ministries and agencies in guiding legal documents after laws and decrees are promulgated.

5. Policy implications

Firstly, diversifying financial products and services

Develop correspondent bank model to expand coverage of banking service points to people in areas without of with few banking services: rural areas, remote areas, disadvantage economic areas.

Developing modern distribution channels based on the application of digital technologies to expand the scope of providing products and services at reasonable costs, especially via the Internet and mobile phones.

Expanding the coverage of service providing points of rural credit institutions to create favorable conditions for rural people to access formal financial services.

Effectively using the public postal network invested by the State at the commune level to act as an agent to provide basic, simple and widespread financial services to people in rural and remote areas, where credit institutions are not yet accessible.

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Developing a transaction account system to expand the scope and increase the number of people accessing formal financial services, for each person having at least one account.

Promoting cashless payments in the economy, facilitating the target customers to access and use cashless payment services.

Developing financial services for rural and agricultural production and business.

Promoting the development of financial services for small and medium-sized enterprises and co-operatives.

Secondly, building the legal corridor system for subjects providing financial products and services

Thirdly, completing and increasing the efficiency of using financial infrastructure

Developing payment infrastructure in the direction of continuing investing in infrastructure in service of strong development of electronic service supply channels such as online banking, Internet banking, mobile banking, ATM and POS; modern payment methods such as contactless payment, mobile payment, payment via QR code...; applying security measures, modern security standards to ensure quick payment, security, convenience and reasonable cost.

Accelerating the completion of the national database system on population, connecting and sharing data with other specialized databases

Building a national database on financial inclusion consistent with international criteria, periodically supplementing and updating data for the evaluation and supervision of the implementation of the national strategy on financial inclusion.

Fourthly, promoting financial education

Developing and implementing inclusive measures to enhance financial management knowledge and skills, improving people's awareness of financial products and services, thereby increasing the usability, benefit and risk assessment of financial products and services provided by official financial institutions so that financial consumers can wisely choose products and services that suit their actual needs.

Developing a legal framework for the protection of financial consumers in a manner that is close to the international practices and standards.

Developing the Deposit Insurance of Vietnam in accordance with the model of one member limited company with 100% of the charter capital of the State, fulfilling the goal of protecting the rights and legitimate interests of depositors, contributing to maintain the system stability of credit institutions, ensuring the secure and healthy development of banking activities.

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