Rise of Fintech Businesses in Southeast Asia to Tackle Financial Issues

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Abstract

In recent years, there has been a global trend toward the convergence of finance and Information Technology (IT) in the form of fintech, leading to the emergence of various financial services. In Southeast Asia, this has led to the rise of numerous fintech businesses, especially those that approach financial sector issues in Southeast Asia as business opportunities. These businesses, many of them led by start-ups, are using technologies and business models that originated in developed countries and China as problem-solving tools. They combine high-tech and low-tech approaches according to local conditions, by introducing cutting-edge technology while also keeping traditional methods. Governments are also looking at fintech in terms of their potential to contribute to the solution of policy issues, financial inclusion in particular.

Introduction

A growing number of fintech-related businesses are emerging in Southeast Asia, many of them utilizing the Internet and smartphones, in conjunction with their usage spreading rapidly in this area. One of the key players of this fintech boom, along with financial institutions and telecom companies, are start-ups. Fintech start-ups have evolved both in numbers and influence. They offer a wide range of services, including e-payments, lending, cryptocurrencies, and money transfers.

The significance of fintech for Southeast Asia

In the emerging markets of Southeast Asia, there is ample scope for the development of fintech businesses. This is because of the potential of fintech to solve the many issues affecting the financial environment in these countries.

In developed countries, the level of financial services available is already relatively high, which means that the improvements provided by fintech solutions are generally only marginal. While fintech can enhance usability of the customers or yield cost savings for financial institutions, so far it has not triggered any dramatic changes to the financial industry. Blockchain technology has that potential, but full-scale practical implementation is still some distance in the future.

This contrasts with the situation in Southeast Asia, where fintech has the potential to have a major impact in finance. The region's financial systems are underdeveloped, and in many countries there is considerable room for improvement through the use of fintech. Various things that were previously difficult can now be achieved with fintech, and the benefits gained from these new possibilities are substantial. Similar factors explain the surge of fintech in China and India.

Another factor that affects the scope for the emergence of fintech businesses is differences in the regulatory surroundings. In developed countries, financial activity is subject to stringent regulation, which tend to create barriers when fintech start-ups try to introduce pioneering initiatives. In contrast, many Southeast Asian countries offer an environment in which fintech start-ups can operate freely because their regulatory systems are either relatively relaxed or have not yet been established.

Key financial issues

What specifically are the issues affecting the financial environment in Southeast Asia? Most of them are common to developing and emerging countries.

First, there is a significant population of people who have problems in terms of identity verification and credit checking, especially among the low-income. From the perspective of banks, providing services to these people is both difficult and expensive. A significant number of people have no documents that can be used to verify their identities, and even if they are available, their authenticity is questionable. For example, in Indonesia all citizens over the age of 17 possess an ID card (Resident Identity Card), but because of inadequacies in managing the system, fraud is not uncommon. Some people possess multiple ID cards, while there are occasional cases of forgery. For this reason, banks need to ask for multiple identifying documents and spend time verifying them.

In addition to the difficulty of identity verification, assessing creditworthiness is further complicated by the inadequacies of credit information systems in Southeast Asia. According to World Bank figures (2017), credit bureau coverage (the larger of either public or private, % of adults) is around 50% in Thailand, Indonesia, and Viet Nam, and only 8% in the Philippines[1].

Also, the financial needs of low-income earners, whether deposits or loans, tend to involve small amounts, leading to higher operating costs for the providers of these services. As a result, banks have been reluctant to offer financial services to low-income individuals and have

[1] World Bank Open Data. https://data.worldbank.org/ (accessed April 25, 2018).

concentrated their branch and ATM networks in urban areas. They have also been charging account maintenance fees, and have applied strict terms and high interest rates to loans. Another factor is low financial literacy among low-income people. For these reasons, formal financial services have not been widely available to people in these countries.

These developments have led to the following issues in Southeast Asia.

- Low bank account holdings
- Limited access to bank loans and credit cards
- Low utilization of banking services
- High rate of cash-based transactions

What fintech can bring to finance

What specifically can fintech achieve that were not previously possible?

First, fintech has transformed mobile devices, such as smartphones, into portable ATMs, allowing users to access basic financial services without needing to go to bank branches or ATMs. In addition, it is now possible to use mobile devices to make payments, both online and face-to-face. The funds that can be used for these mobile payments is no longer limited to money tied up in bank accounts and credit cards, thanks to the emergence of electronic money, which can be used even by people who have no bank accounts or credit cards. With QR code payments[2], accepting electronic payments has become possible at low costs, making this method attractive to retailers that handle small-ticket items, such as street vendors.

At the same time, fintech has made it possible for financial service providers to acquire customer information more easily and at a lower cost than in the past. Identity verification processes can be completed more quickly and no longer need to be carried out at specific locations, thanks to new methods such as image capturing of documents. The use of biometrics is also leading to faster processing and cost reduction.

In addition, financial service providers have greatly expanded the range of information that they can acquire about both individuals and businesses by tracing their digital footprints. For individuals, the content of their social media posts, the types of goods they buy through e-commerce and the sites that they access can to some extent be used to gauge their incomes and personal characters, such as whether they are responsible enough to repay loans punctiliously. Digital footprints can also be used to assess the creditworthiness of SMEs (small and mid-sized enterprises), which is usually difficult if you rely on conventional means. The financial position of an SME that has opened a store on an e-commerce site can be ascertained from various data such as sales figures, deposits to and withdrawals from payment accounts. Methods have been developed to allow rapid, low-cost credit checking by automatically collecting and analyzing vast amounts of data without human intervention.

Characteristics of Southeast Asian fintech businesses

Some of the fintech businesses that have emerged in Southeast Asia are not much different from their counterparts in developed countries. However, there are also many businesses with characteristics that are unique to Southeast Asia and emerging countries. Overall, the following three characteristics can be observed.

First, many of these businesses have been established to solve problems. This reflects the numerous issues that the Southeast Asian financial sector faces. Founders of fintech start-ups in this area tend to begin not by thinking about what they can achieve with fintech, but by identifying problems and considering whether they can use fintech to solve them.

Second, the underlying technologies and business models utilized in fintech businesses in Southeast Asia are generally not developed in the region but are instead imported from developed countries and China. Southeast Asian entrepreneurs identify financial issues in the region and scour the world for fintech technologies and business models with the potential to solve those issues. They then integrate them into their own business operations. From another point of view, which relates back to the first characteristic of these businesses, fintech is considered a tool for solving problems. Little importance is attached to where the technology was originally developed or whether it is simply a rehash of another technology.

Third, the fintech businesses in Southeast Asia employ models that combine both high-tech and low-tech methods. Emerging markets such as Southeast Asia are able to enjoy the "Leapfrog Effect," that is, instead of making progress gradually by introducing technology in stages, they can shortcut intermediate stages and achieve rapid evolution by introducing the latest technology. Southeast Asian fintech businesses have thus leapfrogged and adopted cutting-edge technologies and business models. However, at the same time they also retain traditional methods that seem unsuited to the digital age from the perspective of developed countries. For example, fintech companies that provide mobile payments usually do not offer all services digitally but also through brick-and-mortal small retailers in local communities. One reason for this is the difference in the speed in which digital and non-digital businesses have evolved in Southeast Asia; that non-digital areas have not kept up with digital, resulting in gaps that usually do not exist in developed countries. A good example is that many people do not have bank accounts, a basic necessity from a developed country's point-of-view, even though they own such high-tech gears as smartphones.

The following section will look at fintech businesses that illustrate these characteristics.

[2]With QR codes, payment is completed by scanning a QR code with a smartphone. Shops can store QR codes on smartphones, or simply print them on cardboards, and allow customers to scan them using smartphone apps. Alternatively, customers can install apps on their own smartphones to display QR codes identifying their payment information. The shops can then use smartphones or dedicated devices to scan the QR codes.

Mobile payment services

(a) Typical scheme

Mobile payment services that have emerged in Southeast Asia are basically the same as those in developed countries. However, one feature in Southeast Asia that is not common in developed countries is the availability of measures that can be used by people who do not have bank accounts. As in other emerging and developing countries, most mobile phones are prepaid types, for which call charges must be paid in advance. Users top up from bank accounts, or in cash through local retail outlets and convenience stores. Many of the mobile payments have features that you can load electronic money in the same way.

(b) Case study: MoMo[3]

MoMo is a payment service in Vietnam operated by the start-up M_Service. MoMo was born out of two trends in Vietnam that was perceived as a great business opportunity. The first was that most low-income people were unable to access financial services. The second was that smartphones were rapidly becoming common in Vietnam, including rural areas. Initially M_Service provided payment services using SIM cards, but in 2014 it switched to its own mobile payment app called "MoMo"[4]. The app can be used to load electronic money and carry out various transactions relating to electronic payments, including money transfers between individuals, utility charge payments, online shopping payments, and airline ticket reservations.

In response to the current environment in Vietnam, M_Service's target user base includes not only people with bank accounts, but also people with bank accounts but no local access to bank branches or ATMs, people without bank accounts, and even people who do not own smartphones. To meet the needs of this broad customer base, M_Service has established a network of around 4,000 agents throughout Vietnam. These agents enable people who cannot go to bank branches or ATMs as well as people without bank accounts to load prepaid electronic money for their mobile payments, and to receive cash transferred to them. Those who do not own smartphones can have the agents use their mobile payment facilities to transfer funds or pay utility charges on their behalf.

Currently about one-half of MoMo customers are users of mobile payment services, while the other half use agent services. The company's approach reflects the situation in Vietnam, where customer needs for financial services cannot be met solely through mobile devices. They even offer a feature that allows users to find the nearest agent using the GPS function on their smartphones.

In rural areas of Vietnam, post offices play an important role in providing financial services, such as remittances and payments, for people who do not have bank accounts. However, these services are not entirely customer-friendly. For example, counters normally close at 5 p.m., and remittances take 3-4 days[5,6]. MoMo agents have longer operating hours than post offices, and remittances reach recipients instantly.

In November 2017, M_Service entered into a partnership with Vietnam Sun Corporation (Vinasun), a major local taxi operator and announced several new services[7]. One of them is that passengers on Vinasun taxis are able to pay with electronic money through the MoMo app by using their smartphones to scan the QR codes provided by the drivers. Another is passengers who book taxis with the Vinasun app can choose to link with the MoMo app so that they can pay automatically.

In addition to service content, M_Service claims that it has made security a priority with the MoMo system. It meets the PCI DSS (Payment Card Industry Data Security Standard) and has also adopted layered security measures, such as one-time password verification, and SSL (Secure Socket Layer).

Mobile international remittance services

(a) Typical scheme

A significant number of people work overseas in Southeast Asian countries, especially in the Philippines. These people generally remit funds each month to their families in their home countries, primarily through money transfer operators such as MoneyGram and Western Union. Many expatriate workers do not have bank accounts, and even those that do are eager to avoid the high transfer charges levied by banks[8]. With money transfer operators, transfers commonly involve time-consuming manual processes, and it takes time for the money to reach the recipients. This situation has recently led to the emergence of services that allow people to remit money overseas easily at low costs using mobile devices.

(b) Case study: Toast[9]

Toast provides international remittance services that allow Philippine people working in other countries to send money back home using mobile devices. The service is provided by Toast, a Singapore-based startup, and is currently available in

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[3] The main source for this part is the MoMo website. https://momo.vn/ (accessed April 24, 2018).

[4] "How a fintech outgrew banks in the mobile wallet market in Vietnam", The Asian Banker, May 11, 2017. http://www.theasianbanker.com/updates-and-articles/how-a-fintech-outgrew-banks-in-the-mobile-wallet-market-in-vietnam (accessed April 24, 2018).

[5] International Finance Corporation, "E- and M-Commerce and Payment Sector Development in Vietnam", December 2014, p.14.

[6] Vietnam Post is currently digitizing its financial services in an effort to overcome these issues.

[7] "Vinasun, MoMo partner on smart payments", Viet Nam News, November 17, 2017. http://vietnamnews.vn/bizhub/417696/vinasun-momo-partner-on-smart-payments.html#k7KJEDzukU3iMyC1.97 (accessed April 24, 2018).

[8] According to a World Bank survey, the average money transfer costs in 1Q/2018 were 10.57% for banks, 7.44% for post offices, 6.27% for money transfer operators, and 3.06% for mobile operators. (World Bank, "Remittance Prices Worldwide", Issue 25, March 2018)

[9] The main source for this part is the Toast website. https://toastme.com/sg (accessed April 24, 2018).

Hong Kong and Singapore, but the company aims to increase the range of countries in the future. The co-founder and CEO is Aaron Siwoku from the United Kingdom. He had the idea for the service after seeing Philippine women waiting in long lines to send money home and noticing that they all had smartphones in their hands[10].

The person making the remittance loads the funds though a smartphone app and then completes the transfer process. There are multiple ways to load funds, including transferring from a bank account. Users can also make deposits in cash at affiliated stores. To use this method, the person wishing to make a remittance first scans identification documents into his or her mobile phone and then goes to the affiliated store to hand over the cash. This saves time, since confirmation of identity, which previously had to be carried out in the store, can now be completed in advance on a smartphone. Another advantage of this system is that it is based on a familiar remittance method and is therefore easy for users to accept[11]. A method that would allow the entire process to be completed on a mobile device would be more convenient, but there is a risk that existing customers would not use such a service because of psychological resistance to new ways of doing things.

Recipients in the Philippines can choose from three methods for receiving remittances. They can have the money sent to the Toast app or to their bank account, or obtain cash at an affiliated retail outlet. This means that the service can be used even if neither the remitter nor recipient has a bank account. The service fee is set low. In the case of remittances from Hong Kong to the Philippines, there is no fee when using the Toast App, while a charge of HKD15 (about USD2) is levied when funds are transferred to a bank account, and HKD19 (about USD2.4) for transfers to an affiliated retail outlet.

Toast plans to use the data accumulated through its remittance services to start a lending business for overseas workers. By monitoring monthly remittance amounts, the company can estimate the incomes of overseas workers to some extent as the basis for determining their creditworthiness.

Lending services based on the use of alternative data

(a) Typical scheme

Credit screening schemes based on the use of digital footprints as alternative data have emerged in Southeast Asia. Credit providers have developed these schemes themselves or purchased them from outside. The fact that credit is not widely available in Southeast Asia is attributable in large part to the inadequacy of credit information systems, which makes it difficult to assess the creditworthiness of potential borrowers. By using alternative data as the basis for credit checks, lenders are able to target new borrowers who were previously overlooked due to the lack of credit histories. In addition to the benefits for borrowers, this approach is also expected to allow credit providers to expand their customer bases.

(b) Case study: LenddoScore[12]

Lenddo, based in Singapore, provides personal credit scores, "LenddoScore" and identity verification, "Lenddo Verification" services to organizations such as banks, micro-finance providers, and credit card companies.

"LenddoScore", the credit score service is based on the perception that there are a certain number of people who are creditworthy despite having no data registered with credit information agencies, and that the repayment capacity and commitment of such people can be ascertained to some extent by analyzing their digital footprints, since they generally own smartphones.

Lenddo launched a lending business in the Philippines in 2011 and subsequently expanded into other countries, including Colombia and Mexico. However, it sold the lending business in 2015 and has since specialized in providing services to third parties. It currently offers its services in over 15 countries.

In addition to data provided by credit information agencies, Lenddo also collects and analyses alternative data with the consent of the loan applicants. Using this data, it calculates a credit score (1-1,000, where a higher score indicates a higher credit rating) using its own proprietary method, and supplies this information to banks and other organizations. The types of data gathered include smartphone usage data, social media data, and psychometric data. For example, social media data include pages accessed on Facebook, LinkedIn, and Twitter, access frequencies, the number of friends, and the content of messages. If credit information agencies have data, those are also incorporated. Based on 12,000 data items per case, Lenddo calculates a score using an AI prediction algorithm. The process takes just three minutes.

Digital footprints are also used for "Lenddo Verification", the identity verification service, which can be completed in three seconds. Lenddo boasts that the system is highly accurate. According to Lenddo, other benefits include cost cuts as lenders can reduce the amount of documentation collected from customers, and the number of credit checks that need to be carried out by human staff.

Expectations towards financial inclusion

Southeast Asian governments have taken a keen interest in the emergence of various fintech businesses in the region. Recognizing the potential of fintech to change the face of finance, governments are eager to ensure its sound development, so that it

[10]Jon Russell, "Toast lands $1.5M for cross-border payment services for migrant workers in Asia", TechCrunch, November 10, 2016. https://techcrunch.com/2016/11/10/toast-funding-cross-border-remittance-payments/ (accessed April 24, 2018)

[11]Kevin McSpadden, "Toast to become fully financial service platform for migrant workers", e27, November 10, 2016. https://e27.co/beyond-remittances-toast-wants-to-become-full-scale-financial-services-platform-for-migrant-workers-20161109/ (accessed April 24, 2018)

[12]The main source for this part is the Lenddo website. https://www.lenddo.com/ (accessed April 24, 2018).

leads to the improvement and advancement of their countries' finance systems. Governments in each country are implementing a range of measures, including the formulation of policies, the establishment of specialist fintech units within financial regulatory and supervisory agencies, and the introduction of regulatory sandboxes[13]. The governments have in particular strong expectations toward the potential of fintech to improve financial inclusion.

Low-income and lower-middle-income countries in Southeast Asia have problems relating to financial inclusion, specifically the fact that a significant number of people do not have access to financial services. Financial inclusion is a key policy priority in these countries because of its potential to contribute to poverty eradication and economic development. A variety of initiatives have been implemented over many years. Even in Thailand, a middle-income country where a relatively high percentage of its people have bank accounts, the government is committed to financial inclusion, as bank loans and insurance are not widely available. While Singapore has largely achieved financial inclusion, its government sees this as a problem for the entire region and is thus actively engaged.

Governments in various countries are promoting fintech as a way to achieve financial inclusion. Indonesia and the Philippines have adopted national strategies for financial inclusion, while Myanmar has drawn up a financial inclusion roadmap. Indonesia's strategy highlights the use of ICT, while the Philippines is focusing on the power of technology. Myanmar's roadmap points to the potential of mobile devices (Figure 1).

While Vietnam has not formulated a national strategy, the Deputy Governor of its central bank has acknowledged the role of fintech, saying that "digital technology will help banks accelerate financial inclusion"[14].

In fact, many of the fintech services that have emerged in Southeast Asia can lead to greater financial inclusion. As illustrated by the previously mentioned examples, even people without credit cards or bank accounts are able to benefit from various financial services by using mobile devices. The use of mobile payments can also encourage people to set up bank accounts. This expectation has been heightened by the success of the M-Pesa mobile money transfer service in Kenya. The spread of that system has led to a major improvement in financial inclusion in Kenya[15].

Mobile overseas money transfer services offer a way to send money overseas with lower costs than traditional methods. This reduces the financial burden on people working overseas and their families. Also, the increasing use of lending based on alternative data is improving access to loans for certain segments that were previously unable to obtain finance. This means, for example, that SMEs will be able to free themselves from a hand-to-mouth existence by obtaining loans to buy the latest equipment so that they can increase their earnings.

Indonesia
National Strategy for Financial Inclusion Working Group, **"National Strategy for Financial Inclusion Fostering Economic Growth and Accelerating Poverty Reduction"** (2012) —Main fintech-related references— "Technology can enable some of the most important bottlenecks to be overcome and increase the supply of financial services." (p.8)
Philippines
Bangko Sentral ng Pilipinas, **"National Strategy for Financial Inclusion"** (2015) —Main fintech-related references— "Use of technology and other innovations to reach the financially excluded" (p.8)
Myanmar
Making Access Possible Myanmar, **"Financial Inclusion Roadmap 2014-2020"** (2013) —Main fintech-related references— "Development of electronic payments will require the installation of essential payment, clearing and settlement infrastructure. This must remain a priority for the government." (p.19) "Mobile is likely to play an increasing role in distribution by enabling new business models, and through mobile network agent especially in rural areas." (p.21)

Source: Compiled by JRI from government releases in each country.

Figure 1: Financial inclusion policies in three Southeast Asian countries

[13]Regulatory sandboxes are deregulated environments in which regulations are eased within a limited scope for a fixed period, giving companies the freedom to try out new business ideas, just as children can play freely in sandboxes.

[14]"VN financial inclusion focuses on tech", Viet Nam News, May 20, 2017. http://vietnamnews.vn/economy/376742/vn-financial-inclusion-focuses-on-tech.html#FULOuwWWjkKcY30A.97 (accessed April 24, 2018)

[15]Launched in 2007, the M-Pesa service is provided by the mobile phone company Safaricom. Its use has expanded rapidly among low-income people who have no bank accounts. M-Pesa has also acted as a starting point for the increasing use of mobile banking, including deposits and loans. The percentage of the adult population with no access to financial services has plummeted from 41.3% in 2006 to 17.4% in 2016. (Njuguna Ndungu, "Digitalization in Kenya: Revolutionizing Tax Design and Revenue Administration", in Sanjeev Gupta, Michael Keen, Alpa Shah, and Genevieve Verdier, eds., Digital Revolution in Public Finance, International Monetary Fund, November 2017, pp.243-260.

Awareness of these benefits is prompting governments to promote fintech while also taking steps to ensure that fintech contributes to financial inclusion. In addition to initiatives to improve the usability of services, such as encouraging service providers to achieve interoperability between different mobile payment platforms, governments are also ensuring that users can access financial services safely through supervision, regulation, and the prosecution of fraud. Other government initiatives include educational activities to enable users to make the best use of financial services.

Southeast Asian countries are looking closely at financial inclusion policies in India. The Singapore FinTech Festival hosted by the MAS in November 2017 included a session on India, and the Indian Minister of Finance was one of the speakers. Identity verification in India has become easier since the introduction of a biometric national ID system called "Aadhaar"[16]. India has also launched the Pradhan Mantri Jan Dhan Yojana (PMJDY), a project to ensure that every citizen has a bank account[17]. Under this project, banks have agreed to provide savings accounts without charging account maintenance fees. By the end of 2017, just over three years since the launch of the project in 2014, 300 million new accounts had been created[18].

Concluding remarks

This paper examined the developments of fintech in Southeast Asia. There are many issues related to finance in Southeast Asia that are viewed by the private sector as business opportunities. This is reflected in the continuing emergence of fintech start-ups trying to tackle these issues. Governments in the region are encouraging these developments.

Of course, many obstacles remain before fintech businesses can become firmly established in Southeast Asia and contribute to the solution of the region's financial issues. The sustainability of some fintech business models has not yet been tested. For example, the effectiveness of credit screening systems based on alternative data during an economic recession can only be proven when a recession actually occurs. There will also be fintech businesses that are viable when still small but struggle to maintain their viability as the scale of activities expands. It will take time to determine whether these businesses are truly sustainable.

Moreover, whether potential users of these new financial services will become active users is hard to predict. While strong dissatisfaction with the current state of financial services will certainly motivate people to use the new services, it is not easy to change long-standing customs and practices. In finance, as in any other fields, new things tend to be viewed with unease and suspicion. There is also deep-rooted anxiety about the security of online payment systems. To overcome these barriers, service providers will need to earn the trust of the users. This will require efforts by both the private sector and governments, including (1) the creation of mechanisms that allow potential users to try out new systems and assess their usability, (2) the establishment of both voluntary rules and laws/regulations, as well as security measures, to ensure customer protection and the soundness of transactions, and (3) educational activities to enable customers to use these new services effectively. Only when confidence has been built through initiatives such as these will fintech businesses be able to earn the trust of society and contribute to the solution of financial issues in Southeast Asia. ■

[16] "Aadhaar" is a Hindi word meaning "foundation."

[17] This means "Prime Minister's People Money Scheme" in English.

[18] Pradhan Mantri Jan Dhan Yojana website. https://pmjdy.gov.in/ (accessed April 24, 2018).