**The Development of Digital Financial Inclusion in China**

(The transcript below is based on the online live presentation given by Dr. MO Xiugen on November 20th, 2020)

As you know, digital financial inclusion[[1]](#footnote-0) in China has been developing amazingly fast over the last 10 years or so. Today I am going to share some information about the situation and discuss what force is behind the development. So, tonight we will discuss growth patterns, geographical landscape, business models, driving force, key challenges, and so on.

So, let me start with brief introductions. As you know that the inequalities of our society to a certain degree are due to the unbalance of financial supplies and demand among society sectors. The rich have easier access to financial services than the poor, which leads to the rich got richer and the poor get poorer. So, financial inclusion is a process that provides financial service to those who were unserved or underserved by the formal banking system. Here I would like to bring to your attention that what we mean by financial inclusion is that customers are served by the formal banking systems. So digital financial service means is to provide financial service by using Fintech.

Usually, services included in digital finance is savings, payments, credit loans, insurance, and wealth management. So, usually digital financial inclusion has some features. The first is that the service goes with economic scenarios. For example, WeChat and Alibaba provide financial services under economic scenarios. So, the second is that it employs big data for screening consumers. The third is that they use big data to build their new model for credit scorings. They also reach consumers through mobile channels. The fourth one is that the cost of digital financing is very low. According to the Ant Financial company report, the cost of each transaction is only RMB 1 cent. And finally, digital finance is also high-speed. It’s very fast.

The next question is how we measure financial inclusions. Usually, we have three dimensions, one is measuring the assets, two is we measure the usage, and finally the qualities. Common indicators include whether or not you have a bank account, whether or not you are made available of bank service, and the cost. For usage, we measure the frequencies of users of all kinds of bank services. So, for quality, we will survey consumer satisfaction and consumer experience.

So, here I will give you some examples, the framework we use is that we measure the financial inclusions by that similar dimension here. We measure financial inclusion from three angles, government policy, supply-side, and consumers’ side. For these three sides, we measure the resource they have, the performance of the process, and the outcomes.

how do we select indicators? This is it that criteria are for us to select some indicators. The first one is specific; the indicators should be a specific factor or element. The 2nd one is measurable, indicators should be quantifiable and as exact as possible about who, what, when, and where. The 3rd one is achievable, indicators must be observable. The 4th one is realistic, the data of the indicators must be obtainable. And finally, time-bound, indicators should be able to match the change. So, this is a brief introduction.

Then, we will look at how digital finance grows in China. So, I present to you some data here from 2013 to 2018, the number of digital transactions grew very fast in this period. So, it has grown by about 100%. So, this growth rate is remarkably high. The usage rate of online payments in China also grows very fast, both for people who use mobile payment and for people who use online payment. Both grew from less than 50% to more than 70%. To Continue, the number of payments using the non-banking channel also grows way faster than that through the banking channel. Next, we compare the market structure, for online payment, PayPal is the leading platform with 33% of the market followed by Union Pay with 19%. Next, let us take a look at the number of users and usage rate of Internet wealth management service also grows very fast, from 2014 with 78 million users to 151 million users in 2018. It grows very fast. Then let us look at the structure of the Internet Wealth Management Products, the top 3 are bank deposit that takes 17%, the money market products take also around 17% and the bank wealth product is 13%. Next, we see the development of the money market funds also grows very fast now with a product like Yu’e Bao [[2]](#footnote-1)and public money fund. The Internet insurance market, it also grows very fast. So we can see that the growth rate is high in many dimensions, payment, landing and internet, and other financial services. This concludes the overview of how digital finance grows in China.

That’s all about the overall growth situation of digital finance in China.

The next part is the geographical landscape. Here we have some data, from 2015. It is about the digital financial inclusion distribution in China. We can see that in the coastal area, digital finance is more developed than in other areas. Also, remarkably, there is some fast development in the remote area. Since it is digital finance, people who live in remote areas can use the digital finance service. Next, let us take a look at the hot spot of digital financial inclusion, hot spot means fast-growing regions for digital financing. We can see that in 2016, the development of some areas in Xinjiang province, Tibet, as well as the northeastern regions of China is very fast. Not so much for the coastal areas because the level of development is already remarkably high for the coastal areas. So, the middle and the western areas of China are catching up with the coastal area. Next, if we measure the popularity of the micro-credit companies or what we called Internet lending in China, we can see that it is more developed in the coastal area than other areas. This is because there are many more economic activities in the coastal area. As to the hot spot for the Micro-credit companies, which is an indication of the growth rate, the situation is different. There are some fast-growing regions for micro-credit companies in middle China while similar to the hot spot of digital financial inclusion, the growth rate of micro-credit companies in the coastal area is slow. Next, let us take a look at the situation of digital payment. Similar situation for insurance, it is growing fast in the eastern area of China. The general trend is that if the current level of service is already high, the growth rate will be lower and vice versa.

That’s all about the geographic landscape in terms of digital financing development.

Next, let’s focus on service penetration for different kinds of services. Here the result of the survey on the penetration of the bank accounts. It is conducted in Zhejiang Province three years ago in 2017. We can see that there are 92.7% of people in Zhejiang has a bank account, which is higher than that on a national scale which is only 78.9%. Compare to the international number, 94% of the high-income OECD population have bank accounts. For middle-income countries is about 57.6% and for low-income countries, the penetration rate is about 27.5%. So the penetration rate in Zhejiang is just a little bit lower than in the high-income OECD countries. Then if we compare Zhejiang with other parts of China. The penetration rate in North-East China is 68% while it is 88.3% in Guangxi Province. Zhejiang Performs higher than those areas as well.

Next as for credit, the percentage of households with loans accredited by banks amounts to more than that from other channels in 2016. It is from a survey we have done in Guangxi; most people get their loans from banks. Out of the 50.7% of people who have loans, there are 23.1% of them get their loans from banks. 1.9% is from the Micro-Loans company, 2.6% is from informal channels, and 1.3% is from the rural mutual capital cooperatives. 24.8% of the household applied for loans and 10.06% of them were rejected by the bank. Then we ask the respondents, why their loan applications were rejected by banks. The major reason is their income level was not good enough for a loan. So, these households would go to online channels.

For the third party payment, in Zhejiang Province, the usage rate of the third party payment by mobile phones is around 70% which is quite high, compared to the usage rate among the respondents in high-income OECD countries which is 20.6%. That means, in China, especially in the eastern area, people are more likely to pay with a mobile phone than the high-income OECD countries. When comparing China and the US, the trade volumes in China are worth 790 billion USD, more than 10 times bigger than that of the US which is 74 billion USD. Also, China is leading in the percentage trade through e-wallet in e-commerce section with 62%, much higher than the 2nd country which is Germany with 29%. Still, in poor counties of the North-eastern part of China, the rate of third party payment is only about 11%, much less popular than the coastal area. As to the frequencies of the third party payment distributing over age groups. People who use third party payment every day expands from age 22 to age 68 with no specific spikes for any age groups. The same can be said for other frequencies. However, the age group that never use third party payments are the group between 40 to 60, the elderly. As to the overall frequency percentage, 19.2% of the respondents use third-party payment every day, followed by 14.5% who use it 3 to 4 times a week and 12.5% who use it once or twice a week. The survey is conducted several years ago, the number is higher now for the frequency.

For Online Banking, there are various kinds of services provided through online banking. However, the registration rate of online banking service is 31.7%, yet only 24.2% use the service. So there are people who are curious to register for online banking but not use it. The reason they provided for not using online banking include no computer or Internet at home, fear of online fraud, using mobile banking to replace online banking, but the most reason they give is that online banking is too complicated to use.

Next, let us talk about mobile banking service penetration. Mobile banking in general is becoming very popular. The registration rate of mobile banking service is 44.6%, but only 40.1% use the service. I would like to point out that in poor counties of north-eastern China, the rate of mobile banking is quite low, only 7.23%. As of what kind of service they use when using mobile banking service, 97.4% of respondents uses mobile banking to remittance and transfer purpose. 40% use mobile banking to check the status of their account. 24.5% use mobile banking for shopping purposes. 23.6% use mobile banking to pay fees and bills. 12% uses mobile banking for investment. Other purpose includes offline shopping, loan application, loan payment however the percentages of people use these services are lower. Similar to online banking, we also asked the respondents why some of them are not using mobile payment. The reasons and the percentages are 12% for not having mobile phones, 33% for the complication of the service, 16.3% for fear of telecommunication fraud, 0.9% for using online banking only which is a quite small number of people who can and know how to use but still choose to only use online banking, next is 16.2% think it is more convenient to go to offline banking. Again, the complication is the major reason.

The next service is insurance, as you know, although we have national health insurance coverage in China, some people prefer purchasing commercial insurance to get additional insurance coverage. As we can see here that agricultural insurance is quite popular in the rural area. It is about 67% of households who have purchased household insurance. One major reason for that is that agricultural insurance is heavily subsidized by the government. So, the government will pay about 80% of the insurance fee and the farmers only need to pay the remaining 20%. The next questions are where they get their insurance in the rural area, most of them get their insurance including agricultural, life, health, and property through door-to-door agents. Digital insurance is not that popular even now. This is quite special, as we already talked about it, even for regions with a high level of development of digital financial service like the coastal region, digital insurance is not that popular.

That’s all about the market penetration situation for different kinds of financial services.

Next, after we discussed the geographic landscape and the market penetration situation for a different product, let us talk about business models. What kind of business models digital financial companies are using in China?

The first model is the Digital Platform Model. The company usually would build a platform. The capital of that platform can be from different sources including crowdfunding, Yu’e Bao of Alibaba is an example of this. Also, there are other sources providing capital to the platform. On the other end, people who need money will apply for a loan from the platform. For the rural area, it is usually a farmer. The platform would then use a computer to judge and approve the application. I would like to emphasize that data is the most important resource in this business model. The platform would use the data to identify and classify the applicant of their loans. The platform couldn’t develop the model used by the computer to approve the application if they don’t have the customer’s data. The source of that data can be from previous loan applications also from other sections. For example, Alibaba uses its shopping website to collect that data. This is the first business model.

The next model is the P2P model. The difference between the P2P model compared with the first one is that the platform only collects funds through crowdfunding. And they provide the product information as well as approve loan applications through farmers’ organizations. Again, data is very important here. The key characteristics of the P2P model are: first, the platform lend the money through the internet; second, local entities identify borrowers and guarantee the repayment of that money; third, local entities can be a farmer organization; fourth, income from the interest is shared by the platforms and the local entities.

The third model is the supply chain model. The supply chain model is quite popular. Jd.com[[3]](#footnote-3) uses this model in its operations with the farmers. The source of money is the company of that platform. And the platform will lend the money to farming-related suppliers. Then the suppliers will lend the production tools like seeds and fertilizers to the farmer. Farmer then will sell their product to repay to the platforms with the harvest benefited from those product tools while making a profit. The platform can then collect information from both the suppliers and the farmers directly. The platform will collect from the supplier when and how much the supplier lends the production tools to the farmer. The money will go through the suppliers but it is borrowed by the farmers. From the farmers, they know how many production tools they used to produce the harvest and the cost of those harvests. The platform uses the supply chain model to control their risk. The key characteristics of the Supply Chain Model are: first, the financial institutions provide capital through the supply chain (the supplier); second, products produced will be with the required technical standards since they are produced by the production tools from the suppliers., third, the financial institutions can monitor the procedure of the production with technology; forth, the model relies on Big Data and IT technology.

The next model I want to talk about is the banking model. Mainly banks would use this model. Again, at the center, we have the platform, the banks. The capital can come from saving and other sources like banks’ own investment. In the rural region, through the Internet, the bank would provide service to local agents who then provide the payment service with their cash flow to the end customers. The local agents will get the cash asynchronously from the bank. Of course, nowadays, some banks are directly providing services to farmers. The application is approved by the Rural Credit Cooperative (RCC), a local bank-like organization and they also collect information for the bank. In the end, the farmers would pay back the bank. The key characteristics of the banking model are: first, banks provide services through the internet, including payment, transfer, saving, and cash withdrawal; second, banks provide equipment; third, agencies provide cash flow; fourth, banks pay the service fee to agencies according to the service settlements; fifth, agencies provide other services including shopping, mails, and delivery service to the end customers. The model we talked about here is only applicable to the rural regions.

The fifth business model is the farmer organization model. It is a special organization by the farmers and for the farmers. The organization would act in the rule of the platform in other models. The money can come from different sources including banks, the government, and the shopping platform that they are working with. Then the organization would lend the money to the farmers upon approval and the farmer would repay later to the organization. It is a model that only can be seen in some areas. It does not use the internet in an important way. It is very important for financial inclusion.

Banks or financial institutes would sometimes use multiple models from the five models presented to provide their services. They may select and combine the characteristics of the five models and develop new models. For example, now, some banks are also started to use the digital platform model. They will set up their own shopping platform. The purpose of it is not mainly for selling products. It is to gather information about their consumers and about how many products the farmers sell and what kind of income do they have. Traditionally, the bank can only collect data about financial activities like savings, loans, or payments, they cannot get data about other economic activities. So by using the digital platform model together with the banking model, banks can gather more information about their customer and tailor their service accordingly.

That’s all about the business models.

Next, let’s talk about the driving forces for digital finance. Many people have wondered why digital finance is growing so fast in China. So, let me go through some factors that are related to the development of financial inclusion and digital finance.

The first factor is accessibility. The service should be made accessible to the end customers.

The second factor is the consumer experience. That is very important. As we have discussed before, if the consumers think the service is not good or it is too complicated, they will not use that service.

The third one is the service quality, especially the cost. As we mentioned before, online lending. As we see before, the cost of each lending is only about RMB 1 cent. The cost is very low. Compared to the traditional method, if the institution with door to door agents and validate the risk with human effort, the cost is much higher. Because of such a high cost, the institution will not be interested in the customer who only wants to borrow a small sum of money.

The fourth is financial education. Financial education is very important. We have conducted surveys that discovered that almost all over China, the biggest problem is the lack of financial capability among the customers. Because in China, we don’t teach economy or financial instruments in our pre-university education. As for the university, only those who study the economy or finance learn about finance. For the student of other majors, they will not learn about different financial products or instruments.

The next factor is digital finance and technology, we conduct several surveys and we discovered that if people don’t have access to the internet, they will be unlikely to have access to various financial services. So digitalization, in general, is very important.

The sixth factor is the development of physical infrastructure. In China, the government is now promoting several national programs to improve the physical infrastructure regarding Internet connections. Another aspect of infrastructure is electricity, it is not a big issue in China. But in other countries that I have visited, they cannot get a constant electric supply which is a problem in promoting digital finance because if they don’t have electricity, they don’t have the internet.

The seventh factor is the financial infrastructure. The coverage of financial infrastructure traditionally refers to the number of bank branches, POS, ATMs available in those regions. But now what is more important in terms of financial infrastructure is the availability of data and the connection between different data access points. If financial institutions have access to the record of how an individual pays his own bill, food, or anything, they can use that data to evaluate the credit rating and solvability of that person. But now the data are spread across different service providers. This is an issue for financial inclusion.

The eighth factor is social connections. Social connections are also important because good social connections are more likely to lead to a good reputation and good social credit.

The ninth factor is trust and social capital. It is related to how honest and trusting the social construct. If the person is cheated, how likely for him to complain and how likely for him to trust the government to help.

The tenth factor is risk management ability. It is related to how well he can manage risk. It is believed that poor people may have poor risk management ability but our research yield that small banks in rural and poor areas have very good risk management models and the default rate is very low. So, it is a misconception that needs to be changed.

The eleventh factor is the cost, functionality, and appropriateness of products and services. It is related to how matching the overall product can meet to the market’s expectation.

The twelfth factor is economic conditions. It can be seen that in areas with a good economic condition like the eastern area of China, the financial condition is also very well.

The thirteenth factor is motivational effort. And the fourteenth factor is self-motivational effort.

Both of them are related to whether or not the customers are motivated to spend the time, effort to learn about financial services.

With these fourteen factors in mind, let us discuss why digital finance grows fast in China. There are several reasons, and we will examine them one by one. The first one is that China has well-developed infrastructures. The coverage rate of both the Internet and the mobile network is quite high. Also, the smart phone is very popular in China. Also, the government is pushing the development of infrastructure in rural areas through subsidies. For financial infrastructure, the situation is improving as well. I have visited several rural places and they are actively collecting information for credit rating to smoothen the operation of financial services in that area. The information collected covers a wide range of data points including their income, their current economic situation, even their relationship with their neighbors. With these data, financial institutions would be able to rate them by stars. For example, if the household gets a 4-star rating, they are more likely to get a loan of RMB 100,000. Another important type of infrastructure is logistics. As you know, e-commerce relies heavily on logistics. Now the logistics industry has developed quite well in China with very good geographic coverage. This also encouraged the popularization of digital services.

The second one is supportive and relaxed regulation. There are more than 10,000 Microcredit companies companies in China because the regulation is supportive. Before local credit cooperatives cannot be registered to operate nationally, they can only operate in their own regions. But now with digital finance, they can take their service online, and when they are online, they have no boundary. They can provide their services all over the country which allows them to have a lot of customers.

The third one is the drive for innovation. Financial institutions are constantly trying to develop new technology, new business model, and new ways to engage the customer. The “red pocket” on Wechat is an example of this.

The fourth one is that in China we have an exceptionally large population and market size with unmet financial needs. Traditionally the financial service mainly aims for the high-income market and ignores the rural market. Now with digital finance, the market potential of the rural market is being released.

That is all about why digital finance grows so fast in China.

Now let us talk about the key challenges here.

The first challenge is financial stability. It is a global discussion. Traditionally financial institution believes that to lend money to low-income people or small companies is very risky. They are considered to have a lower capacity to pay back the money. To lend money to them will increase the risk level of the entire system which will impact financial stability. But the other argument is that since these people are unserved by the financial institutions, they have fewer opportunities to improve their living standards. But their savings in the bank will be used to benefit the rich people, putting more pressure on the social structure and eventually destabilize the entire society. Here is a challenge that we need to balance and address to improve the overall financial stability. The other challenge that threatens financial stability is over-indebtedness. It is quite straightforward; some people do not have good financial behavior and allow themselves to be overleveraged. This will damage financial stability if they cannot repay their debt. That is another factor.

The second challenge is what we call in Chinese “wolf in sheep’s clothing”, There are companies who claim to provide service to improve financial inclusion but they are not doing any of that. Some of them even engaged in illegal activities. On the consumer’s side, the protective measure and general financial education need to be improved. With innovation in digital financial services, there are also digital frauds that are targeting less financially educated people. This is the second challenge.

The third challenge is the Digital Gap. Digital gap refers to the situation where people lives in different areas or with different social background actually causing the digital finance experience to be different due to the characteristics of their background causing a gap in the service they received. Urban area and rural area are one aspect, the same service will be received differently because of the different levels of financial education and economic situation in the areas. Also, the differences in financial infrastructure is another type of digital gap. People who live in areas with poorer financial infrastructure is more likely to be excluded from the digital financial service. Some companies are trying to bridge the gap by providing people from such areas the first loan of their household. The first loan is very important. Their behavior on the first loan will largely decide their credit rating which determines whether or not they can get a second or third loan in the future. The gap between those who have and those who don’t have a smart phone is another type of digital gap which is quite self-explanatory. The current digital financial service is mainly designed for those who have smart phones excluding those who don’t have one. But this in China is only limited to specific areas. Some elder people are also excluded by the digital financial service because they are not very good with new technology. Other gaps include educated people between people with limited education, even between those who have better financial literacy and those who don’t have. The digital gap is one of the key challenges for financial inclusion.

The last challenge is data security. The key questions to ask are: first, are the data collection process of companies legitimate? second, how to protect personal information from being used in a harmful way? third, Who is more likely to be excluded from the digital economy? These are tough questions that incur heated discussion among the government, the society, the banks, and financial institutions. The government is trying to draft some laws to address this. Data is now one of the factors for production. The human being at the very beginning only uses human labor as a factor for production. And then later land becomes another factor, followed by capital. It is very important.

In my opinion, the regulators should consider data as a factor for production. The regulation should not affect economic development, meanwhile, it needs to protect personal information from being misused. And more importantly, we should decide the ownership of the data, who should own the data? For example, when I am browsing online, my data is being used to give my recommendations. It even goes to another website. So is that data mine or the company’s? It is an important question. It also relates to the division of benefits and we don’t have such laws to regulate it yet. Another issue is the if we treat data as a factor for production, should it be shared by different companies, be shared? If data is a factor for production, no companies would be willing to share it just like they would not be willing to share their capital. So this is a big issue.

With this, I conclude my presentation. Thank you for joining me today.

1. Financial inclusion is defined as the availability and equality of opportunities to access financial services. [↑](#footnote-ref-0)
2. Yu'e Bao is an online spare cash management platform launched by Ant Group in the Alipay app [↑](#footnote-ref-1)
3. JD.com is a e-commerce platform in China that offers a wide variety of products usually with nationwide overnight delivery. [↑](#footnote-ref-3)