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Banking on Fintech: Financial Inclusion for Micro Enterprises in Indonesia





PULSE STORIES

Date of Publication

The report was published in September 2018 and is available for public access through pulselabjakarta.org

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Acknowledgements

The Banking on Fintech: Financial Inclusion for Micro Enterprises in Indonesia research was conducted by Pulse Lab Jakarta (PLJ), with the support of the Department of Foreign Affairs and Trade (DFAT) Australia and the Indonesia Fintech Association (AFTECH). Pulse Lab Jakarta combines data science and social research to help make sense of our interconnected, interdependent, and complex world. The Lab is a joint initiative of the United Nations and the Government of Indonesia, via United Nations Global Pulse and the Ministry of National Development and Planning (Bappenas) respectively.

Pulse Lab Jakarta is grateful for the support of the following fintech service providers who have also been research partners in this study: Amarta, BTPN Wow!, and Go-Pay. The research would not have been possible without their generous knowledge sharing, facilitation of our research with their service users, and feedback on our insights and ideas.

Finally, and most importantly, special thanks to more than 100 micro merchants who welcomed us during our research in Jakarta, Bekasi, Sukabumi, Bogor, and Banyumas and shared their stories. Their enthusiasm and willingness to share their experience in setting up and running their business and using fintech products have been very valuable. All the quotations in this Pulse Stories are drawn from interviews, but we have used pseudonyms to protect the privacy of the respondents.

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Executive Summary

For many street food vendors, small shop owners and thousands of micro entrepreneurs across Indonesia, access to financial services that can help them to meet their needs often lies outside their reach. In Indonesia, micro enterprises make up the majority of enterprises, with roughly 99 per cent of all enterprises being micro enterprises. With the uptick in the number of financial technologies (fintech) in Indonesia, there are emerging opportunities that can aid the delivery of faster and more efficient services in developing countries. To promote resilience and growth within Indonesia's unbanked micro business sector and support the Government of Indonesia's financial inclusion agenda, Pulse Lab Jakarta conducted a research project to understand the experiences of early fintech adopters among those enterprises.

Acknowledging that there is extensive ongoing research investigating some of the behavioural barriers to getting the unbanked population aboard, we have taken note of a number of digital financial service providers in Indonesia that have started to reach previously unbanked micro enterprises through mobile savings accounts, mobile payments, and peer to peer group lending. Our main research question therefore was: **Why, and how, despite the same obstacles and behavioural barriers, have some micro enterprises made the leap and began to use these services?**

Methodology

We have aspired to uncover learnings from early adopters' stories and translate them into opportunities for the rest of the unbanked population. To answer our research question, we partnered with three fintech companies (who are already addressing the micro merchants segment) to identify our respondents. We employed a set of methods under one defining methodology of human-centred design, which refers to a problem solving approach that involves researchers empathising with the people, or users, for whom the service is intended. The aim of this approach is to understand the needs, desires, pain points and experiences of the respondents. As it is a qualitative research method, this research aims to provide an in-depth understanding instead of being statistically representative.

Our emphasis on behavioural insights stems from the realisation that while financial inclusion efforts should be pioneered by higher-level policymaking, it must also be supported with a clear understanding of the realities of the target users. The research team interviewed a total of 116 respondents, 70 per cent of whom are women, in five areas in Java: Jakarta, Bekasi, Sukabumi, Ciseeng, and Banyumas. Micro merchants who either run small shops for daily goods or eateries, and sell phone credit on the side, make up 90 per cent of our respondents.

Why don't micro merchants adopt formal financial services?

In the course of learning about micro merchants' business life and money cycles, we identified three main mental barriers that have hindered micro merchants' adoption of conventional formal financial services as well as services facilitated through fintech.

First, **there is nothing wrong in dealing with cash.** Most micro merchants we interviewed save money at home because it is easy and practical. Having cash in hand means they can immediately use their money for business or personal purposes, especially since transactions with customers or suppliers are still done in cash. For them, depositing and withdrawing cash from a bank account is not worth the hassle.

Second, **micro merchants often plan for the short term with a view that financial services are only for the long term.** Micro merchants differentiate 'savings' from '*nyisihin*' or 'setting aside' -- their habit of reallocating their daily earnings into different pockets of daily expenses with a smaller portion for weekly or monthly expenses. For them, a savings account is used to permanently deposit a sum of money that should not be withdrawn or allocated to pay expenses. They also think that only large deposits are appropriate for a bank account, not the few thousand rupiahs they usually set aside for slightly longer term needs. Therefore, as much as they understand the importance of having a bank account, they don't find it necessary based on their everyday needs.

Third, **although mobile phone ownership is high, many micro merchants are uncomfortable to adopt new uses of technology.** The 2017 Global Findex estimated that 60 million unbanked people in Indonesia have mobile phones. Most of the micro merchants we met do have mobile phones - as many smartphones as feature phones - or at least one mobile phone in their family household. However, unlike most of the urban middle class population, they do not think of mobile phones as highly personal items or a medium to maintain social connections. Other than a few micro merchants who are exceptionally entrepreneurial, micro merchants only use their mobile phones for basic functions such as texting and calling when there are urgent needs. Only a few of the people we met use social media and most share their phones to be used by other family members. We found that most micro merchants are uneasy



with the idea of adapting to new technology. They admit that fintech might be able to help them manage their money and business, but they find the process of getting to know a new service overwhelming.

Enabling factors: It's the humans, not the technology

By focusing our research on early adopters of fintech products and services - mobile savings account, mobile payment, and peer to peer group lending - we were able to break down the experience of micro merchants in adopting a fintech service despite the aforementioned mental barriers. We identified a user journey through fintech adoption from first exposure, decision making, sign-up, initial use, up to retention - the most crucial and yet vulnerable part of fintech adoption. The journey captures not only activities and requirements for each stage of the adoption process, but also the thought process, influencers and emotions involved.

From the adoption journey, we identified four enabling factors that help facilitate fintech adoption: trusted peers, appropriate use case, accessibility, and affordability. These enabling factors are highly dependent on agents - the human intermediaries between a fintech service and their users. These agents are vital and essential in supporting merchants' fintech adoption. They act not only as the communicator and motivator in the exposure and decision processes, but also as problem solvers in the sign up, use, and retention phases. In addition to being a conduit for information, as trusted peers, agents play the role of an emotional mediator who helps micro merchants overcome their uneasiness with technology and behaviour change.

Key Insights and Design Principles

We summarised what we learned about micro merchants' behaviours, thoughts, and emotions on fintech and financial management in eight key insights:

1) Micro merchants plan for the short term and think that financial services are only for the long term.

We found that many micro merchants plan for the short term — daily, weekly, monthly, and for very few cases, long-term. Given the limited income they earn, micro merchants tend to set money aside each day with a specific purpose in mind, be it to repay a loan at the end of a week, pay monthly expenses such as electricity or water, or cover children-related expenses. Money earned today will be spent almost right away or the following day. This short term planning habit has an implication on how micro merchants perceive financial transactions with formal banks, which they see as only for the long term and only when they have extra money that should remain untouched once deposited in a bank.

2) Fintech mobile savings account is used as a temporary wallet

When micro merchants use mobile savings accounts, they use it to save frequently for a specific purpose, be it to collect money for relatives at home or to save up to go back to the village. Once it has been accumulated to a certain amount, micro merchants will either withdraw the money collected or transfer it to another bank account, which is usually the same bank used by the receiving party of their money transfer.

3) Agents and users view each other as people, not functions

There is a strong, trust-based relationship between the agents and the users, and agents rely on this familiarity to recruit and maintain users. As a result, users often see agents as 'neighbours who can help' instead of 'representative of formal financial institution' which for example could lead to agents not wanting to burden users by introducing new features that seemed complicated for the users.

4) Social norms influence decision-making

Family and friends are the main influencers in micro merchants decisions to save or borrow and where to save or borrow money. At times, users signed up for a service to follow the footsteps of others in their neighbourhood, or out of the desire to help or not disappoint their peers who are fintech agents. Outside of their immediate social circle, we found that micro merchants' business partners, such as



distributors or suppliers, could also push micro merchants to adopt a financial service.

5) It is all about convenience, not about risks or costs

Micro merchants prefer convenience over cost. In terms of lending, for instance, micro merchants weigh *how often* they have to repay and *how much* they have to pay per installment, rather than the interest rate or expected return/profit after using the loan. More frequent repayments in smaller amounts, such as weekly repayment terms instead of monthly, is considered to be more convenient. If they can afford the weekly repayment, independent of the interest rate requested, they would consider the loan to be affordable. We see the same pattern in savings habits where merchants prefer to save at home due to its practicality, despite the higher risk of theft.

6) Agents and users rely on oral communications

Most micro merchants are reluctant to read brochures or written information about a digital financial service. They

rely on a one-on-one approach where an agents, usually a trusted peer, would teach and guide them during the sign-up process and throughout their use of the service, since they 'speak the same language'.

7) Incentives matter

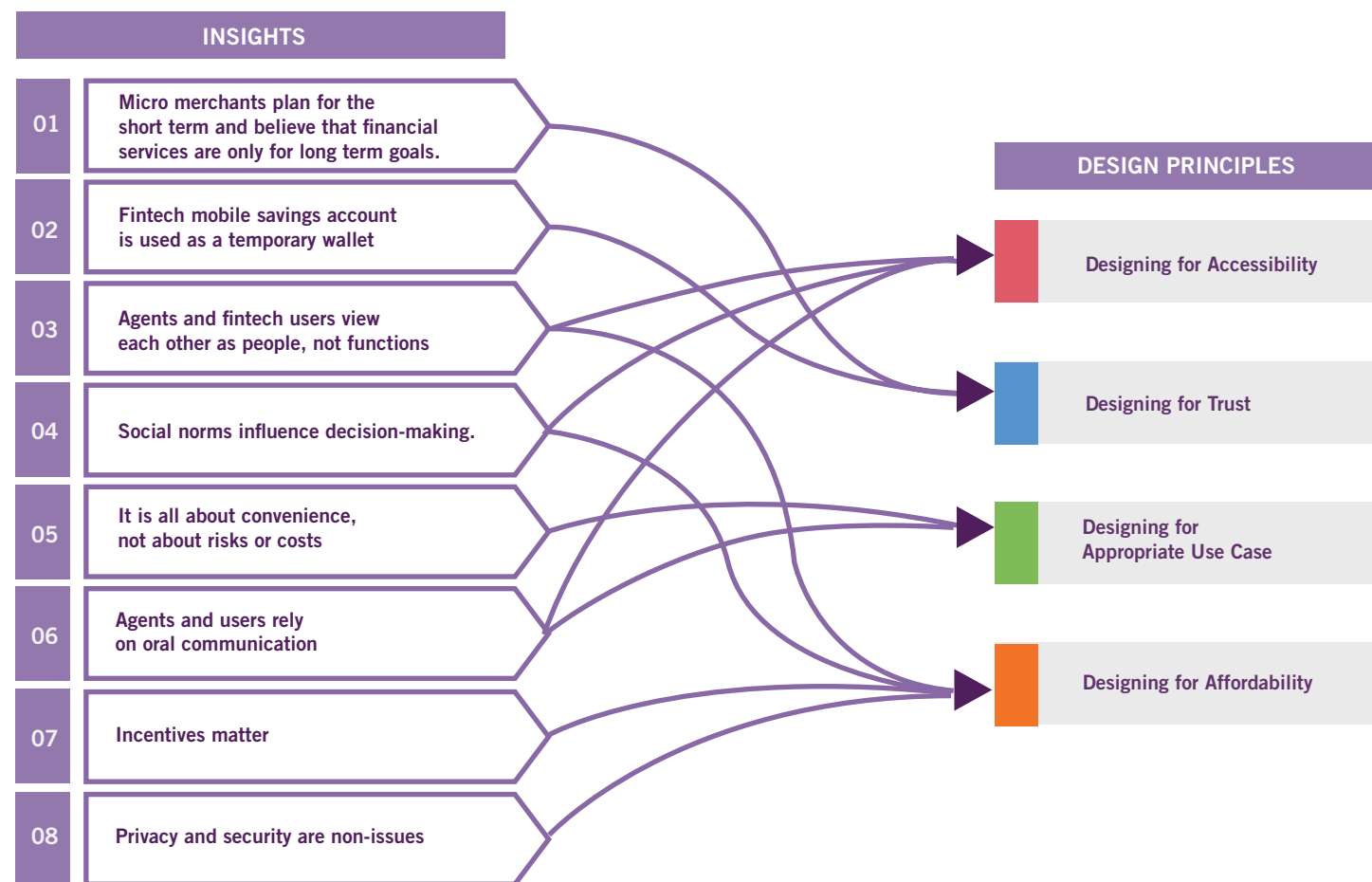
Incentives matter for both agents and users. For users, incentives that work best are embedded in the terms and conditions of the service itself, such as terms of repayment for a loan. For agents, accumulated incentives and how they translate into additional income or side job opportunities would motivate them to perform better.

8) Privacy and security are non-issues

As the relationship between agent and user is based on trust, privacy and security are seen as non-issues. We found many instances of non-secure practice, such as password sharing or leaving money with agents without checking whether it is deposited immediately. Understanding the concept of privacy and literacy in consumer safety and

protection protocols are imperative for micro merchants, as it is for any user of fintech, to reap the benefits of using financial services.

These insights demonstrated that for micro merchants, **how fintech is introduced and implemented are more influential than details of the technology itself in a micro merchant decision to adopt a digital financial service.** Therefore, rather than recommending product or service ideas, for which there are many latent needs, we opt to translate our insights into design principles. The design principles embody our understanding of the finance and technology-related attitudes and behaviours of micro merchants, particularly the enabling factors that equip them to adopt digital financial services. These principles can be applied by fintech companies as design directives in developing and testing a variety of solutions for micro enterprises in Indonesia.



Designing for Accessibility

Accessibility means much more than the distance between micro merchants' homes and the location of a financial service, or whether the hours of the service are flexible enough to accommodate their needs. It also means that micro merchants have access to information that is given in a way that makes them feel confident that they understand what the service is about and the requirement it entails. Accessibility is especially challenging for several segments in the micro merchant community, such as the elderly, women living in rural areas, and semi-literate merchants, who would require a tailored communication approach, or at times a specific scheme, to make them feel that a digital financial service is accessible for them.

Designing for Trust

Trust is a theme that constantly appear in our conversations with micro merchants. Trust is embodied in agents, trusted peers who act as the human interface of a digital financial service. Micro merchants also need to trust their ability to use the technology in order to adopt them, although in many cases they will place their trust in the agents' ability

and willingness to help them use the service. For micro merchants who act as fintech agents, they also need to trust the brand and the incentive system applied by the company to have enough motivation to perform their role.

Designing for Appropriate Use Case

Micro merchants respond much better to specific use cases than introduction to product knowledge, which they often find overwhelming. Appropriate use cases are usually immediately relevant to the daily habits of micro merchants, so the behaviour change required to adopt the digital financial service is not too drastic. They also work better in convincing micro merchants to adopt a digital financial service when agents introduce them in bite-sized pieces.

Designing for Affordability

What micro merchants perceive as affordable depends on the context of their lives. Comparing the terms and conditions of a digital financial service with a banks is not always persuasive for micro merchants, since they are less likely to consider banks as a viable option especially when it comes to loans. Micro merchants also compare a digital

financial service against other options that are accessible to them, such as microfinance institutions, cooperatives, loan sharks, and *arisan*. For merchants whose money earned is quickly spent, time can be more important than cost in defining affordability. Since their financial cycle is short, it is more affordable for them to fulfill shorter term financial obligations such as weekly instead of monthly repayments for a loan.

Going forward: signs of impact and a caution

The growing fintech industry in Indonesia is starting to reach micro merchants. Agents, the human intermediaries between a fintech service and its users, are essential in breaking barriers to fintech adoption. They play an active role as motivators to join the service, educators and problem solvers in using the service. However, despite the help of agents, the problem of fintech services is not in the user adoption, but in retention.

Retention only occurs if fintech services deliver a positive impact to micro merchants' business and daily lives. Mobile savings accounts where users can deposit small amounts of cash were found very useful by the customers. Peer to peer lending definitely presents a strong use case as most micro merchants are unable to access capital from formal institutions. As for the payments service, micro merchants see the potential of using this service in the long run, as it allows them to reach out to more customers.

Learning from the early adopters, we saw some signs of financial behaviour changes among micro merchants after using fintech, which will bring a bigger impact to their lives in the long term. First, we found that although the 'cash is king' mentality is alive and strong, micro merchants can be nudged to use digital financial services more frequently. With the support of agents who introduced relevant use cases and act as a reminder system, users are more inclined to use digital financial services more frequently. Second, we found that micro merchants do not only use their money for business but also as cash reserves for emergencies, which shows that they are planning not only for the short term, but also for long term and urgent needs. Finally, impact was particularly strong for women in rural areas who have been considered unqualified for formal loans. Fintech allows these women access to microloans with very few requirements, which in turn allows them to sustain their business and become the main or secondary income earners.



Finally, our research highlights that finance is a social activity for micro merchants, as it is for most of the unbanked communities in Indonesia. This is extremely different from the individual approach used by the middle and upper class, the segment that financial and fintech actors more commonly addresses, to consume technology and financial services. For one, while middle and upper class consumers are willing to learn of new service features that may benefit them, unbanked micro merchants tend to stick to a few use cases they are comfortable with and avoid being exposed to multiple features because they find the experience overwhelming. For another, micro merchants rely on their agents and peers so much that they are willing to share passwords, a high risk behaviour from a security perspective. Privacy and consumer protection is already a priority agenda for policy makers in the fintech space, but a policy approach that takes into account the social aspect of finance and the unbanked community's reliance to their peers is required to realise the potential of fintech for the financial inclusion of this cohort.



Setting the Context: Financial Inclusion for Micro Enterprises in Indonesia

Micro merchants make up the backbone of Indonesia's economy, yet many of them are often excluded from financial services. Can fintech accelerate their financial inclusion?



Indonesia's economy has been growing rapidly in recent years and is projected to become one of the world's biggest economies (PriceWaterhouseCoopers, 2017). Along with this rapid growth, however, inequality is also on the rise, and this is often cited as a growing risk for social cohesion and, in turn, the overall economic outlook (Demirgüç-Kunt et al, 2018). One prominent aspect of this inequality is the access disparity among economic groups towards financial inclusion. Only 37 per cent among those who are banked come from the poorest 40 per cent in Indonesia (Digital News Asia, 2018). More than just a buzzword, financial inclusion focuses on ensuring that individuals, regardless of income levels, have access to appropriate financial services. The broader goal of financial inclusion is to help improve welfare, by removing barriers to safe and efficient means of conducting financial transactions.

In particular, Indonesian micro, small and medium-sized enterprises (MSMEs) are typically unable to access capital to invest in business development and increase their business potential. Since MSMEs employ more than 107 million Indonesians and contribute at least 60 per cent of GDP, this is a missed opportunity (LPPI - Indonesian Banking Development Institute and Bank of Indonesia, 2015). Financial inclusion can contribute to the growth of their businesses with improved access to convenient

financial services and products. More than just increasing access to capital, financial inclusion can also help to equip the economically vulnerable with the financial security that is needed when facing economic shocks or disasters.

Full financial inclusion: A state in which all people have access to a full suite of quality financial services, provided at affordable prices, in a convenient manner, and with dignity for the clients. Financial services are delivered by a range of providers, most of them private, and reach everyone who can use them, including disabled, poor, rural, and other excluded populations (Center for Financial Inclusion, 2018). Financial inclusion is often validated by the percentage of (adults) population having a bank account. However, as having access to a financial service does not equal active usage, the Global Findex uses both access and use of financial services as indicators to measure financial inclusion (Demirgüç-Kunt et al, 2018).

Micro enterprises: Productive businesses owned by an individual and/or group of individuals that have net assets worth a maximum of IDR 50 million (not inclusive of land and buildings where the business is located) or an annual sales revenue that do not exceed IDR 300 million (LPPI - Indonesian Banking Development Institute and Bank of Indonesia, 2015).

Micro merchants: Individuals who work in or own a micro enterprise.

Micro enterprise focus, macro reach through fintech

Among all the MSMEs in Indonesia, micro enterprises make up the majority of the enterprise proportion. Roughly 99 per cent of all businesses in Indonesia are micro enterprises, according to Ministry of Cooperative SMEs Indonesia (Ministry of Cooperative SMEs Indonesia, 2014). It then becomes increasingly important to narrow our focus down to micro enterprises, as they have both the economic potential as well as the economic vulnerability particularly in times of economic shocks or natural disasters. The Indonesian Government defines micro enterprises as 'productive businesses owned by an individual and/or group of individuals that have net assets worth a maximum of IDR 50 million (not inclusive of land and buildings where the business is located) or an annual sales revenue that do not exceed IDR 300 million' (LPPI - Indonesian Banking Development Institute and Bank of Indonesia, 2015).

In 2016, the Indonesian Government launched a National Strategy for Financial Inclusion, which aims to provide regulatory support for banking institutions as they work to guarantee more Indonesians' access to financial services. Following this, the Financial Services Authority (OJK) announced that more progressive financial technology regulations—designed to promote financial inclusion—were also underway (OJK, 2018).

Prompted in part by the Government's push, many financial institutions are adopting financial technology-based initiatives to advance financial inclusion for individuals who are unbanked. Most notably, through digital financial services, defined as the range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances, and insurance (Alliance for Financial Inclusion, 2016). Indonesian fintech regulators, Bank Indonesia (BI) and OJK have addressed three types of services, namely electronic money, peer to peer lending and payment services¹. At the same time, an opportunity lies in the high number of mobile phone ownership. Around 60 million unbanked people in Indonesia own mobile phones (Demirgüç-Kunt et al, 2018), which presents a massive opportunity for fintech services to penetrate through mobile phones.

As of 2018, there are around 235 financial technology companies in Indonesia, the majority of whom declare a focus on supporting MSMEs (AFTECH, 2018). Indonesia Fintech Association, or AFTECH, acknowledges the importance of the micro retail market for financial inclusion and has set 'developing quality products for the micro retail market' as one of its priorities in the Roadmap to Support Financial Inclusion. AFTECH acknowledges that the biggest challenge in addressing its cohort is that unbanked micro enterprises are hard to reach, therefore expensive and hard to scale, and that this segment is seen to be less profitable than the upper and middle class segments (AFTECH, 2018).



Fintech: Financial technology refers to the use of technology and innovative business models in the provision of financial services (Alliance for Financial Inclusion, 2016)

Digital financial services: The broad range of financial services accessed and delivered, through digital channels, including payments, credit, savings, remittances and insurance. The digital financial services (DFS) concept includes mobile financial services (MFS) (Alliance for Financial Inclusion, 2016)

Adoption: The process of choosing, acquiring, and using a new invention or innovation (Hall and Khan, 2002)

¹ Electronic money, payment transaction processing, and P2P lending are regulated under BI Regulation No. 20/6/PBI/2018, BI Regulation No. 18/41/DKSP/2016 and OJK Regulation No. 77/POJK.01/2016, respectively.

We recognise that the promise of fintech as an accelerator for financial inclusion is highly dependent on supporting infrastructure in an area, particularly electricity and network coverage to support mobile telephony, which are often not available in areas where the unbanked communities live.

Previous studies have also highlighted non-infrastructure barriers preventing adoption of fintech services by poor communities. One of the most cited factors is the 'cash is king' mentality. In reality, most unbanked individuals feel that living in a cash-based ecosystem does not pose a significant enough problem for them to warrant a change in habit. Therefore, fintech services might also have to be designed to cater to their current cash-based habits, instead of completely excluding their existing habits and pushing for a total behavioural change (Mori & Zimmer, 2014; CGAP, 2014).

In spite of this challenge, some studies have identified that savings is the gateway for micro merchants to use mobile financial services in Indonesia. In a study by Mori and Zimmer (2014) in Java, micro merchants expressed a latent need for an end-of-day savings account, followed by the need for microloans to smooth erratic income cycles, electronic transfers, and payment tools. In fact, some banks and fintech companies have followed up on these opportunities by offering mobile banking, microloans, and mobile payment services to micro merchants, mostly starting from Java. What factors have enabled these micro merchants to adopt fintech services and what was their adoption journey like?

Using human-centred design to learn from fintech early adopters

Our research focuses on identifying the needs, challenges, and opportunities shared by micro merchants in adopting and using three types of digital financial services, namely savings, microloans, and payments. We engaged with three local institutions that have pioneered digital financial services for unbanked, low income communities in the area of "Laku Pandai" branchless banking, peer to peer group lending, and mobile payments (see the definition box). In engaging with these institutions, we established a clear understanding of their products, the fintech landscape, as well as gained access to their merchant partners to become our research respondents.

Laku Pandai: A branchless banking program in Indonesia, aimed at providing basic financial services, such as opening of bank account, deposits, withdrawals, money transfer etc. through agents (MicroSave Helix Institute of Digital Finance, 2017). Laku Pandai, which we refer to as mobile savings account in the rest of the report, uses mobile phone technologies in which each mobile phone is connected to a Basic Savings Account (BSA). BSA sets no minimum balance and limits to transactions, no monthly administration fees for account opening or closing fees but limits its transactions to a cumulative IDR 5 million per month (OJK, 2014).

Peer to peer lending: A platform that allows consumers to lend and borrow and to do so in very small amounts. When these loans are intermediated by a peer-to-peer lending platform, a third party handles credit scoring, loan origination and collections, and shares a portion of the profits with the lender (Wein et al., 2017). In this research we focus on peer to peer lending using group lending strategies, which we refer to as peer to peer group lending, where joint liability is used as "peer monitoring" to ensure timely repayment of loans. In particular, we are focusing on the experience of the borrowers of peer to peer group lending instead of the lenders.

Mobile payments: Payments for goods, services, bills and invoices with a mobile device (such as a mobile phone, smart phone, near field device, PDA or personal digital assistant) from one or more sources of stored value by taking advantage of wireless, near field and other communication technologies. Mobile devices can be used in a variety of payment scenarios, such as payment for digital content, services, goods, or to access electronic payment services to pay bills and invoices (Dalberg, 2016).

For this research, we focused on micro enterprises from the food and beverages as well as retail sectors² as enterprises in these sectors have the highest interaction frequency when it comes to supplier-customer exchanges. We also focused on enterprises in Java considering that this is where the majority of fintech companies in Indonesia operates (Deloitte, 2015).



² Retail trade, including the resale (sale without transformation) of new and used goods mainly to the general public for personal or household consumption or utilisation, by shops, department stores, stalls, mail-order houses, hawkers and peddlers, consumer cooperatives etc. Food and beverage service activities, including food and beverage serving activities providing complete meals or drinks fit for immediate consumption, whether in traditional restaurants, self-service or take-away restaurants, whether as permanent or temporary stands with or without seating. Classification and definitions are adopted from the International Standard Industrial Classification (ISIC) Rev. 4



The main research question we wanted to answer from our research was: Why, and how, despite the obstacles and behavioural barriers, have some micro enterprises made the leap and begun to use fintech services?

We break down our main research questions into three sub questions:

- How do micro merchants manage their business and finances? How do they perceive fintech services compared with other formal financial services?
- What are the challenges and enabling factors that merchants face in their journey of adopting fintech services?
- How have fintech services changed or supported micro merchants' businesses and daily lives?

To answer our research questions, we employed a set of methods under one defining methodology of human-centred design, which refers to a problem solving methodology that involves researchers empathising with the people (or users) for whom the service is intended.

The aim of this approach is to understand the needs, desires, pain points and experiences of the respondents (O' Grady, 2006). Our emphasis on behavioural insights stems from the realisation that while financial inclusion efforts should be pioneered by higher-level policymaking, it must also be supported with a clear understanding of the realities of the target users.

Unlike other qualitative methods, the human-centred design approach is meant to uncover latent needs from personal stories and experiences. The research team conducted in-depth interviews to find out reasons behind respondents'

thoughts and actions; relied on user shadowing and observation to capture what micro merchants actually do (not what they say they do); and employ sacrificial concepts³ - hypothetical service or product mock-up - to elicit insights on respondents' beliefs and norms.

Our fieldwork in numbers

The research team interviewed a total of 116 respondents, 70 per cent of them women, who are customers and agents of fintech services in five areas in Java: Jakarta, Bekasi, Sukabumi, Ciseeng, and Banyumas.

The fact that we have more women than men respondents can be explained by two factors. First, a high number of female respondents came from the women-only peer to peer lending service we focused on. Second, women own 52.9 per cent of the micro enterprises in urban areas (International Finance Corporation, 2016) and may have factored into the demographics of our respondents.

A total of 59 of the respondents run their own business as a means for livelihood, while 45 respondents, most of them women, operate their shops to provide additional income for their households. The respondents run either small shops for daily goods or eateries, and a few of them sell phone credit on the side.

³ A sacrificial concept is an idea or solution created to help understand the issue further. It is a concept that doesn't have to be feasible, viable, or possible since its only purpose is deeper understanding. A good sacrificial concept sparks a conversation, prompts a participant to be more specific in their stories, and helps check and challenge your assumptions (IDEO)



From our overall group of respondents, 94 are early adopters of fintech, of which 26 of them act as agents (who are responsible for acquiring and helping users sign up for fintech services). From these 26 agents, 20 of them are micro merchants who act as agents in addition to running their own business (and the remaining 6 are individuals who do not own a business but have another job, for example working as a teacher). We also interviewed 22 micro merchants who are non fintech users.

By focusing on both fintech and non fintech users, we were able to observe the financial management behaviours from the two groups in order to identify challenges and opportunities for fintech development.

In addition, we also interviewed 30 staff members from fintech companies. The staff members range from product developers, marketing staff, research and development teams members, and field officers who interact directly with micro merchants (the latter of which was the majority). The research findings and analysis were then validated through three workshops (one for each of our research partners), where a significant portion involved gathering feedback to check whether our analysis was on track, as well as whether

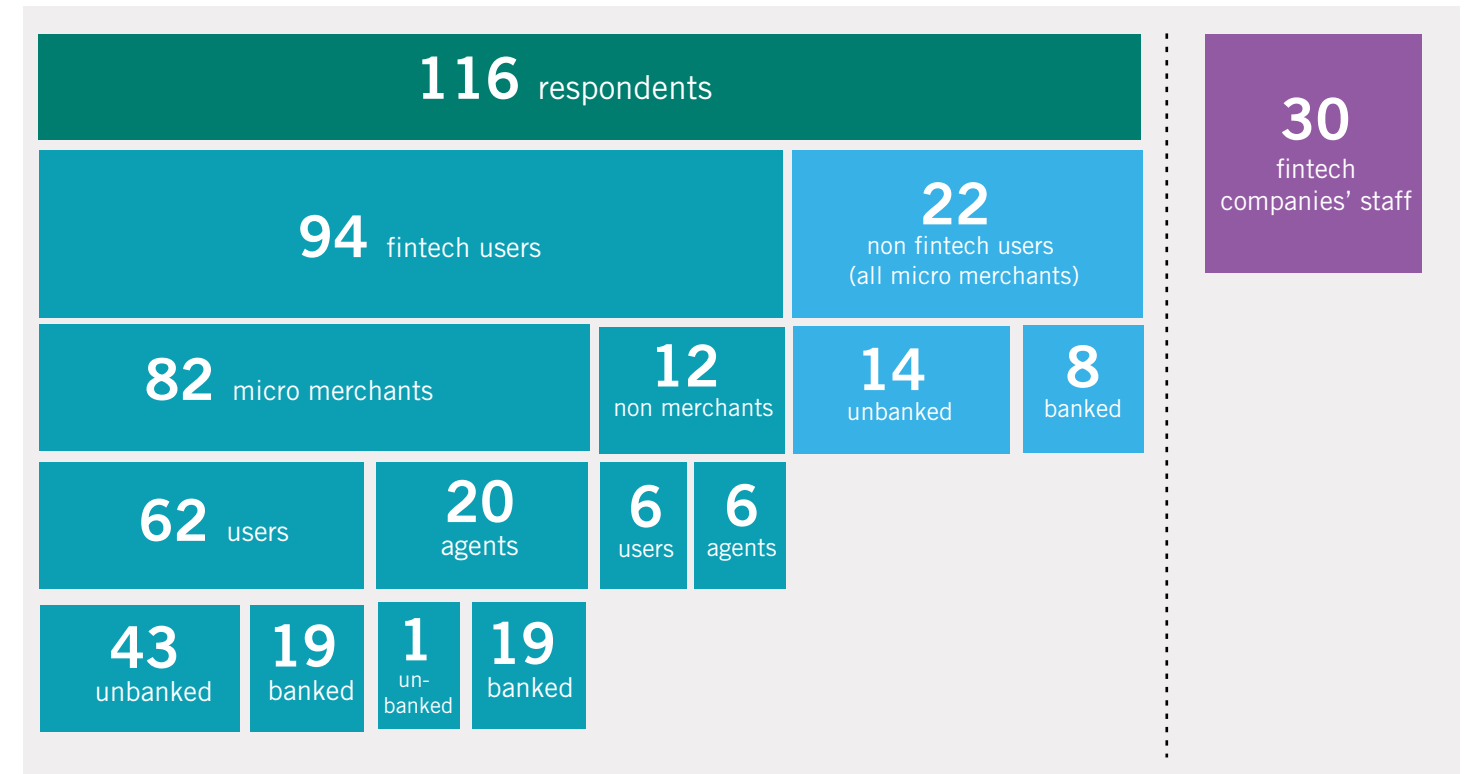
it made sense to the subject-matter experts, in this case our fintech research partners.

Banked: People who own a bank account.

Unbanked: People who do not own a bank account. In our research, unbanked include customers of non-bank micro-finance institution (MFI) either formal or non formal

Agent: Any third party acting on behalf of a bank or other [fintech service] provider to deal directly with customers. Agents are typically located in retail locations (such as pharmacies, small stores and gas stations), and receive a commission for services performed, such as cash-in, cash-out, transfers, and customer registration (Oliver Wyman and Microsave, 2017).

4 Formal non bank MFI includes cooperatives, pawnshops, and village fund and credit institutions. Examples of these institutions include: Kelompok Simpan Pinjam (KSP), a cooperative; Lembaga Dana Kredit Pedesaan (LDKP), pawn shops; and Baittul Maal wa Tamwil (BMT), a microfinance institution based on Islamic principles. Non-formal, non-bank institutions consist of non-government organisations, self-help groups, and microfinance based on Islamic principles (Kikkawa and Xing, 2014).



ABOUT THE RESPONDENTS

81 female
35 male

The age range of our respondents is 22-60 years old

All respondents we interviewed have a mobile phone or at least one in the household

INTERVIEW

63 interview sessions :

55 in-depth interview

8 focus group discussions

89 hours of interview

14 sacrificial concepts

LOCATIONS

28 respondents in Banyumas

20 respondents in Bekasi

27 respondents in Bogor

19 respondents in Jakarta

22 respondents in Sukabumi





Getting to Know the Micro Merchants

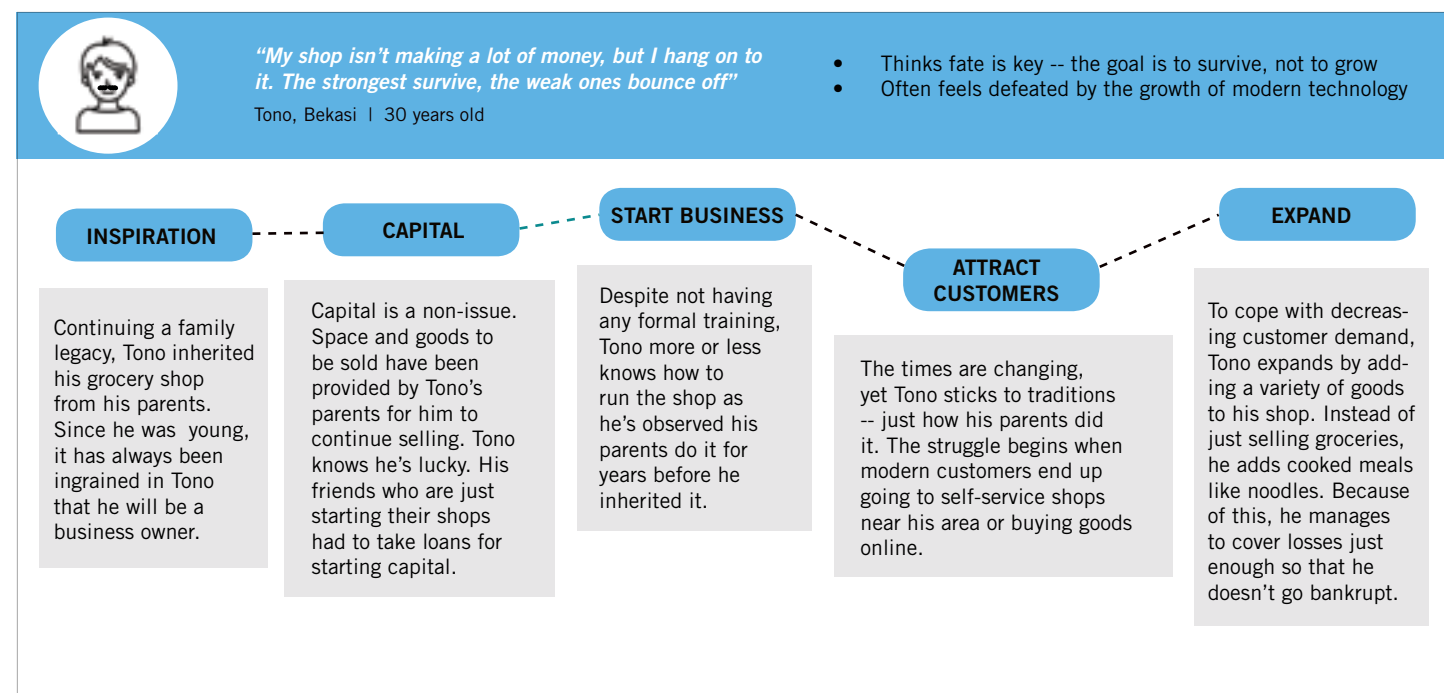
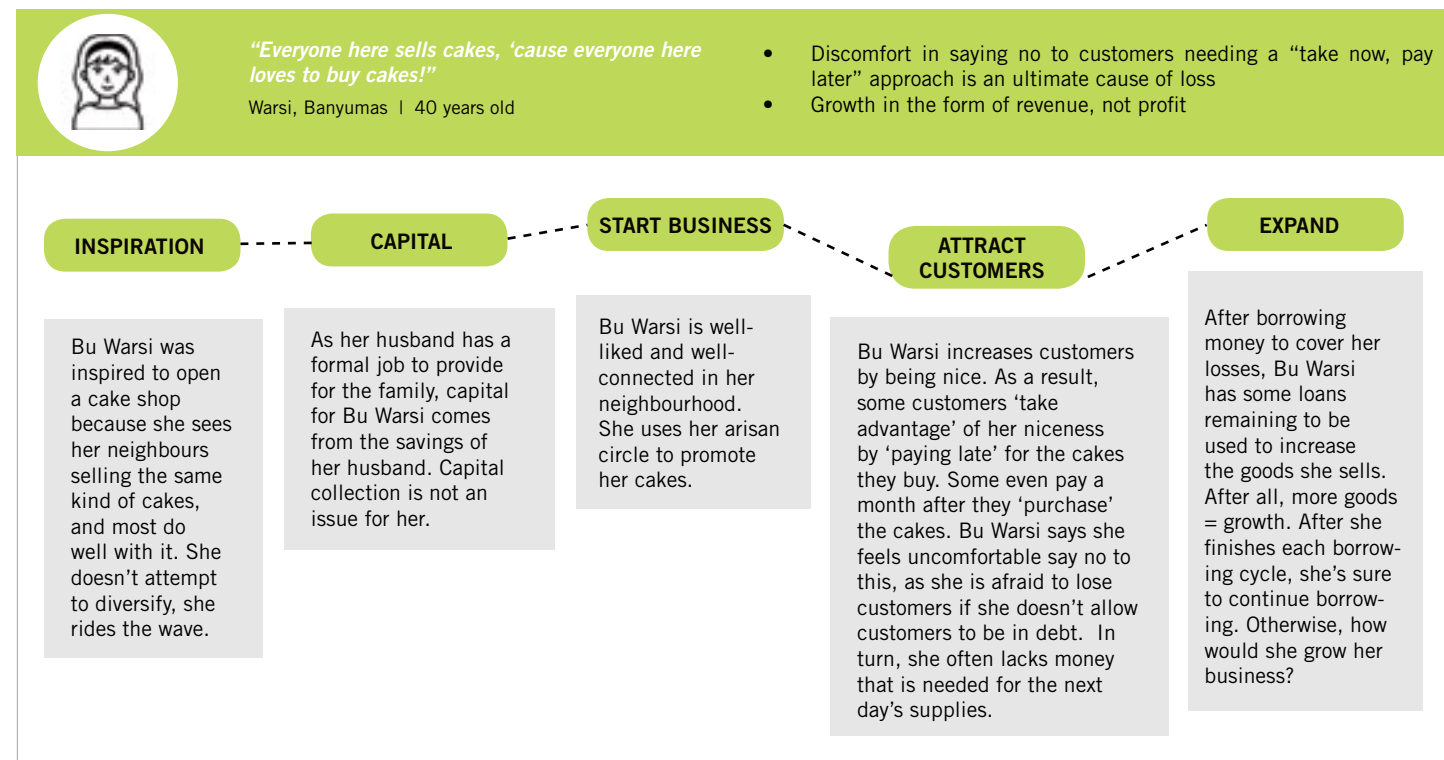


How do micro merchants start and manage their business?
How do they manage their finances?
Why do some micro merchants remain unbanked?

The Business Life Cycle of Micro Merchants

How do micro merchants start and manage their business? To illustrate this, we chose to use a business life cycle in which we describe merchants' activities and challenges they come across in managing their business. The business life cycle will help to inform us about the thought process

and activities that merchants have gone through in setting up their business. Let's take a look at the experience of two micro merchants we met: Ibu Warsi (a food vendor) and Pak Tono (who runs a small shop out of his home).



Ibu Warsi and Pak Tono may only be two out of the hundreds of micro merchants we met, but we found that the stages of their business life cycles also apply to many of their peers.

Inspiration - In general, there are three common factors that play a big role in starting a business, namely: motivation, opportunity, and ability. *Motivation* may include factors beyond the control of an individual (extrinsic), such as immediate financial needs - as well as factors stemming from individuals themselves (intrinsic), such as pride and drive to contribute to the family. *Opportunity* includes the availability of space and time that merchants are able to spend for their business. Lastly, *ability* pertains to the skills necessary for merchants to establish their own business. A typical scenario for micro merchants include having both the opportunity and motivation (i.e. drive to succeed, need for money, as well as spare time and space), yet not having the skills or ability to start or operate a business. Because of these opportunities, they often do not meticulously strategise their businesses for profit gains. **In other words, their businesses start and progress organically, often without a strategic plan.**

Capital - Many micro merchants either **use their own money to start their business or borrow capital from their immediate network, such as family or friends.** There are three reasons for this. First, the initial amount for their capital is usually relatively small, especially for those who already have the space for selling. Because of the small amount required, it is usually easy to borrow money from their family or acquaintances. Second, they often fear the risk of repayment. Family and acquaintances are usually more flexible in terms of the loan amount and repayment time. Borrowing with low risk is preferable by our respondents. Finally, **most micro merchants we interviewed believe that borrowing from a bank is not an accessible option for them.** They are troubled with the requirement and the process involved in asking for a loan and the consequences if they are unable to pay back the loan.

Starting a business - For some micro merchants, **starting a business is perhaps the most emotional phase.** Excitement, insecurity and feeling ashamed of not selling enough goods were among the common expressions shared by the respondents. Most micro merchants tend to learn by doing, not by preparing. Common sources of inspiration include family members who also own a business, or just personal observation of their surrounding environment. This includes



observing market prices of goods from fellow merchants, asking customers about the types of goods they need, and seeking mentoring from more experienced relatives. As a result, **a lot of trial and error occurs when they start their business** --errors range from failure of gaining new customers to mistakes in deciding which kind of businesses to start.

Attracting customers - Merchants are limited to social strategies when gaining customers. They rely on being friendly and accommodating to customers' demands, instead of championing the quality of goods and services to gain customers. As a negative effect, they often experience losses in income for the sake of maintaining their customers' loyalty --mostly when they allow customers to pay at a later time. In many cases, merchants feel ashamed or are hesitant about asking customers to pay their debts, because they fear it might affect the good relationships they've built with their customers. This results in even further losses for the merchants, especially as they judge 'success' by the amount of goods they've sold, instead of the amount of money they've earned. Due to their limited social network which they rely on, they do not tend to try and access a wider network of customers, which is why it is important for them to maintain existing customers.

Expanding - Limitations in business knowledge mean most merchants are not familiar with the idea of profit as a parameter to growth. **When asked about how they define growth, merchants expressed that it is when they've sold more goods, regardless of the equally increasing cost of selling them.**



Many typically do not conduct financial administration for their business such as calculating profit or loss or administering customers debt to avoid the hassle of doing so.



The money cycle of micro merchants

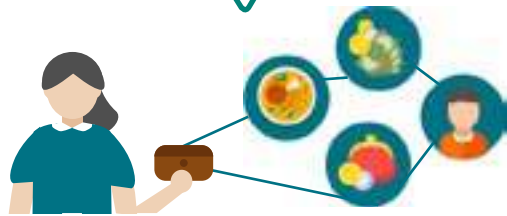
Despite their diverse nature of businesses, and ways of conducting them, we have found a pattern that merchants share when managing their finances. Unlike the cycle of their businesses, their financial management-- or money cycle-- has a much shorter time frame. In general, we have found that businesses plan for the short term, which reflects on how money gets spent or earned. Their money cycles range from daily, weekly, monthly and long term (i.e. annually, at most). Micro merchants are used to irregular income. Most of them work every day throughout the week

to cope with their financial needs. They are used to living with limited financial conditions, which means the money they earn will be spent rather quickly either to cover personal expenses, to maintain their business, or take care of their family. The only long-term financial plans they make are related to major events, such as religious holidays or a wedding in the family, which requires them to have additional income. Every now and then, they face urgent crises that can interrupt their finance, such as unexpected illness, death of a family member, theft, or natural disasters.

DAILY

Micro merchants have the habit of “nyisihin” or “setting aside”, reallocating their daily earnings into different pockets of daily expenses with a smaller portion for weekly or monthly expenses.

“My wallet has four sleeves. I put all my money in them, each sleeve for a different purpose. One sleeve is to buy food, another is for my kids’ pocket money, the other is to collect money for my weekly loan repayment, and the last one is for back-up in case I have unexpected expenses.”



Earnings	Expenses
<ul style="list-style-type: none"> The day’s business revenue 	<ul style="list-style-type: none"> Food for the family Supplies for next day’s sales Children’s pocket money A small portion, from the daily income, set aside for weekly or monthly expenses

Current Financial Touchpoints	Opportunities for Fintech
<ul style="list-style-type: none"> Cash transaction for receiving income and making payment Makeshift piggy bank and wallet Daily group savings (Arisan) 	<ul style="list-style-type: none"> Mobile savings account for saving and transferring small amounts of money Digital payment for receiving payment

WEEKLY

Micro merchants used the build up of their daily income to pay weekly expenses, for example to repay loan payments or for stocking up on supplies, and, especially for women, weekly group savings such as weekly arisan.

“Once a week, after I have set aside enough money, I go to my supplier and restock the expensive stuff for my warung, like rice, sugar, and cooking oil.”



Earnings	Expenses
<ul style="list-style-type: none"> Accumulated savings from daily nyisihin practice Husband’s weekly salary, particularly for women micro merchants whose husband works in construction sites or factories 	<ul style="list-style-type: none"> Loan repayments Weekly restock of non-perishable goods Electricity top-up for those using the pre-paid system Mobile phone balance (pulsar) top up Saving through a community / group mechanism

Current Financial Touchpoints	Opportunities for Fintech
<ul style="list-style-type: none"> Community based group savings mechanisms Suppliers for non-perishable goods Peer to peer group lending agents for weekly repayments Prepaid electricity token top-ups Prepaid mobile phone balance top-ups 	<ul style="list-style-type: none"> Mobile savings accounts for saving, transfer, and topping up prepaid electricity tokens or mobile phone balance Microloans with weekly repayment scheme Digital payment system for FMCG (fast moving consumer goods) suppliers

MONTHLY

Other than paying monthly expenses like water and electricity, the most distinct characteristic of monthly financial activities is the level of formality. Half of our respondents have bank accounts and use it monthly for transferring funds to relatives who live out of town and some for mortgage repayments. The rest asked for help from relatives and friends who own bank accounts.



“Monthly expenses are costly! There’s the water and electricity bills, and also the money for my parents in the village.”

Earnings	Expenses
<ul style="list-style-type: none"> Accumulated savings from daily nyisihin allocated for monthly expenses Any remaining unallocated earnings for the month Husband’s monthly salary, for women micro merchants whose husband has a formal job 	<ul style="list-style-type: none"> Electricity/water payment for those using the postpaid electricity system. House or shop rent Credit repayment for motorcycle, television etc. Children’s school fees Monthly community based group saving (Arisan)

Current Financial Touchpoints	Opportunities for Fintech
<ul style="list-style-type: none"> Community based group saving mechanisms Electricity and water bills payment Credit repayment (e.g. motorcycle, television) via bank account Money transfer for out of town relatives via bank account Money transfer for out of town relatives via friends’ bank account House or shop rent 	<ul style="list-style-type: none"> Mobile savings account for savings, transfer, repayment of credits, and payment of monthly electricity and water bills Microloan for individuals

LONG-TERM

‘Long term’ for micro merchants usually means one year. Their long term planning is usually event-based, such as saving up to return to their villages during Eid Al Fitr or if there is a wedding in the family, and highly dependent on weekly or monthly community group savings that are cashed out every six to twelve months.



“Without the arisan, I won’t be able to see my family at home for Eid Al Fitr!”

Earnings	Expenses
<ul style="list-style-type: none"> Any extra earning after all expenses are paid Arisan cash-out New loans, either from friends or micro-finance institutions, if the opportunity arises 	<ul style="list-style-type: none"> Religious holiday event Travel back to hometown Wedding in family Children’s annual school-related expenses, e.g. new uniform, books, stationery.

Current Financial Touchpoints	Opportunities for Fintech
<ul style="list-style-type: none"> Community based group savings Loan providers, both formal and informal 	<ul style="list-style-type: none"> Mobile savings account with a micro-deposit feature Microloans for individuals

The money cycle indicates that finance is a social activity for micro merchants, as is the case for the majority of low income communities. They tend to save through group mechanisms, such as arisan with friends and relatives they trust. The social aspect also serves as a kind of active 'reminder' for them to save. To cope with urgent financial needs, such as when a family member falls sick or has passed away, micro merchants establish a social security mechanism such as relying on donations or loans from family and friends.

Many fintech companies have taken note of this social aspect and now employ an agent system that incorporates local figures from their target communities, which we will discuss in more depth in the next chapter.

Why don't micro merchants access formal financial services?

In the course of learning about micro merchants' business life and money cycles, we identified three main mental barriers that have hindered micro merchants' adoption of conventional formal financial services as well as services facilitated through fintech.

First, **there is nothing wrong in dealing with cash.** Most micro merchants we interviewed save money at home because it is easy and practical. Having cash in hand means they can immediately use their money for business or personal purposes, especially since transactions with customers or suppliers are still done in cash. For them, depositing and withdrawing cash from a bank account is not worth the hassle.

Second, **micro-merchants often plan for the short term with a view that financial services are only for the long term.** Micro merchants differentiate 'savings' from '*nyisihin*' or 'setting aside' -- their habit of reallocating their daily earnings into different pockets of daily expenses with a smaller portion for weekly or monthly expenses. For them, a savings account is used to permanently deposit a sum of money that should not be withdrawn or allocated to pay expenses. They also think that only large deposits are appropriate for a bank account, not the few thousand rupiahs they usually set aside for slightly longer term needs. Therefore, as much as they understand the importance of having a bank account, they don't find it necessary based on their everyday needs



Even when they do open bank accounts, micro merchants usually do so because of a desperate need to make use of its convenience, such as if they need to transfer money to their parents back home. They use bank accounts not as a medium to manage their finances, but instead to perform that one necessary task that can't be addressed through another means.

Third, **mobile phone ownership is high, but micro merchants are uncomfortable to adopt new uses of technology.** The 2017 Global Findex estimated that 60 million unbanked people in Indonesia have mobile phones. Most of the micro merchants we met do have mobile phones - as many smartphones as feature phones - or at least one mobile phone in their family. However, unlike most of the urban middle class population, they do not think of mobile phones

as highly personal items or a medium to maintain social connections. Other than a few micro merchants who are exceptionally entrepreneurial, they only use their mobile phones for basic functions such as texting and calling when there are urgent needs. Only a few of the people we met use social media and most share their phones with other family members.

As part of our research method, we came up with mock-ups of various fintech services (sacrificial concepts) to gauge how open micro merchants are to new fintech services and the steps they take to decide whether a service is useful for them. The sacrificial concepts ranged from an app to record small debts owed by their customers to an online group lending mechanism, which we introduced through a step-by-step visual walkthrough of the service.

When presented with these mock-up services, we found that several of the micro merchants are uneasy and overwhelmed with the idea of adapting to new technology.

They admit that the features introduced might be able to help them manage their money and business, but they find the process of getting to know a new service overwhelming. Some micro merchants said that they do not use their mobile phones that often; others said that there are too many steps required to understand the range of services offered by an app. In all the cases though, despite owning and using mobile phones, there is a self-limiting belief in micro merchants' ability to use their phones in ways that they might not understand.

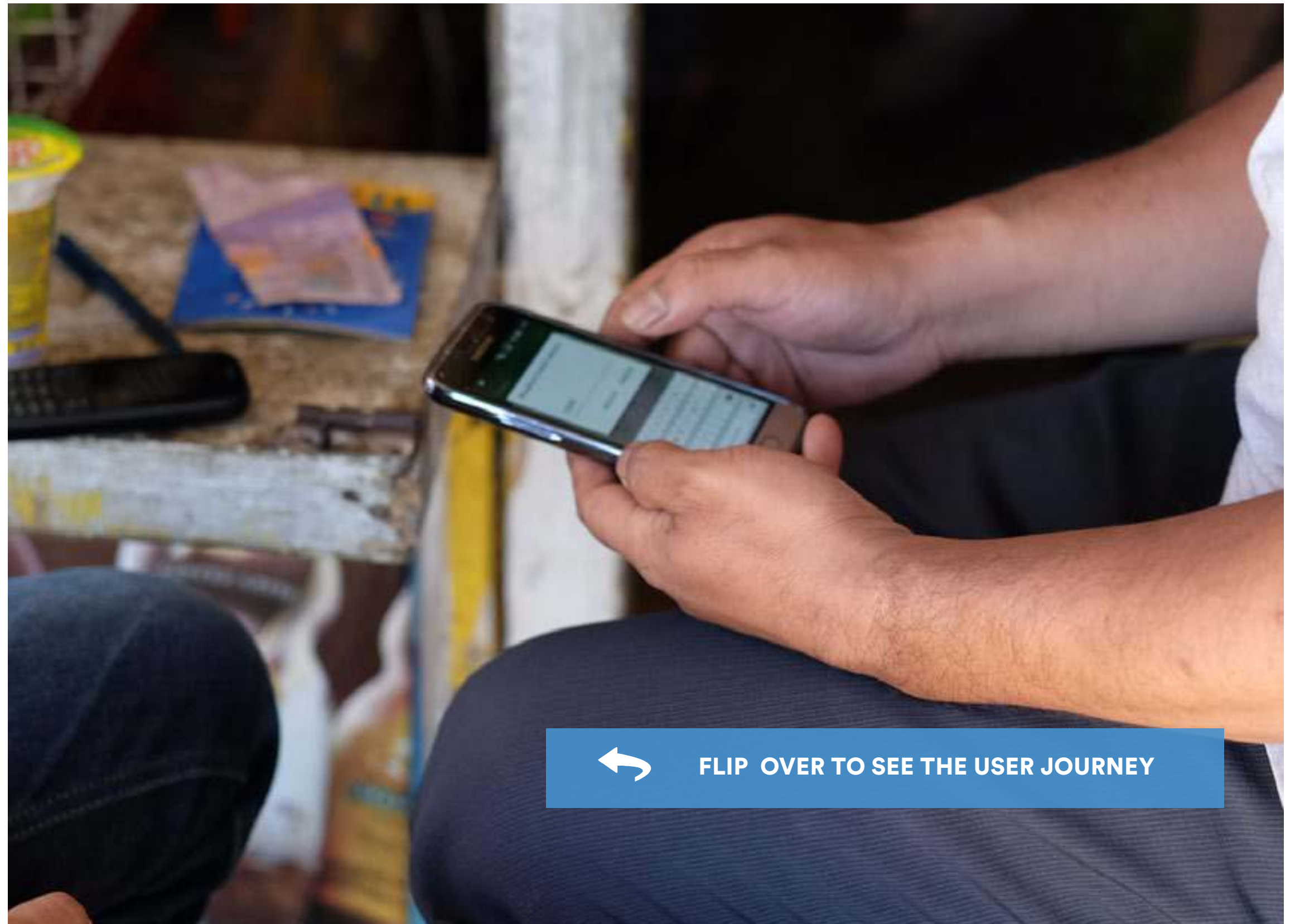


Fintech Adoption: User Journey and Enabling Factors

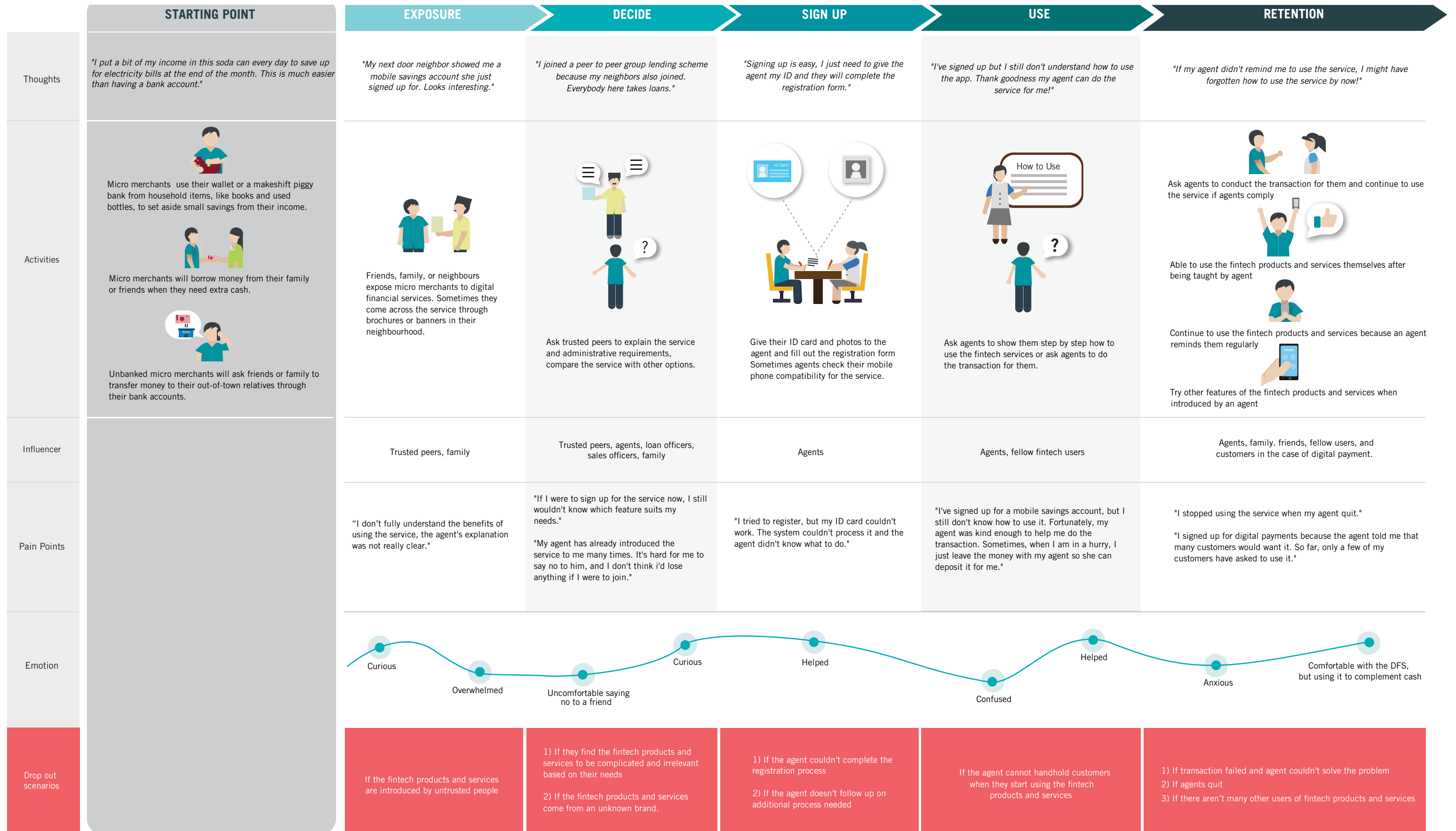


What does it take for micro merchants to adopt fintech services?

Given the mental barriers described in the previous chapter, how can we understand the experience of micro merchants in adopting fintech services? By focusing our research on early adopters of fintech products and services - mobile savings accounts, mobile payments, and peer to peer group lending - we were able to break down the experience of micro merchants in adopting a fintech service and then identify a **user journey through fintech adoption**. This journey captures not only activities and requirements for each stage of the adoption process, but also the thought process, as well as the influencers and emotions involved.



FLIP OVER TO SEE THE USER JOURNEY





potential users are likely to deem a fintech service as too complicated and would thus decide not to use it. However, once a micro merchant finds a use case that resonates, he or she usually compares the terms and conditions of the fintech product or service with whatever equivalent that is currently available to them. Micro merchants tend to sign up if they perceive fintech products and services to be easier and cheaper than their current practice. However, many users also admitted that they only decided to sign up, because they feel uncomfortable saying no to a friend who is an agent, even if they believe the fintech services will not be significantly more useful than their current practice. Put another way, as long as the fintech service is not a worse alternative, micro merchants are willing to sign up to help a friend.

For users, **sign up is usually an easy process, especially with the help of an agent.** Generally, potential users are required to submit certain documents, such as an ID and agents usually go out of their way to facilitate the sign-up process. For instance, many of the agents assist the users to meet the requirements for signing up, by checking their mobile phone compatibility, filling out forms, or helping them to set up an email account which is a prerequisite for sign-up. If an agent fails to facilitate the registration, potential users are highly likely to withdraw from the process.

The user journey so far demonstrates that fintech adoption is highly dependent on the quality of interaction between agents and potential users. This is still the case for when users started **using** the fintech service after sign-up. Agents typically guide new users to navigate fintech services immediately after sign-up, but in many instances they continue to handhold users long after sign-up and actively remind users to continue using fintech services, including through face to face interactions.

The most vulnerable point in the adoption journey is on the post sign-up phase. We found in our study that signing up for fintech services is not an issue, but **retention** is. Micro merchants who find that fintech products have helped their businesses to grow will continue using fintech and some of them even actively promote the fintech product. As for micro merchants who do not receive immediate impact from fintech, whether for their personal life or business, going dormant is inevitable.

As described in the previous chapter, the user journey starts with micro merchants in their status quo mindset in which they perceive formal financial services to be out of reach. Although there is a latent need for financial services, not all micro merchants are actively looking for these services. Therefore, their **exposure** to fintech usually comes by way of introduction through neighbours, family, or friends who are either fintech users or agents – and by agents, we mean different roles for human intermediaries between fintech providers and potential users typically responsible for user acquisition, whether they are called agents, field officers or staff members. Some of these agents are often micro merchants themselves. Hence, exposure is usually facilitated through people who micro merchants already know and trust (although we found cases where fintech users were first exposed to the service through banners or branch presence in the area). Media, such as television or radio, does not seem to play a role in influencing micro merchants' exposure to fintech services.

Once micro merchants become interested in fintech, the next crucial step in **deciding** whether or not they should sign up for the service is for them to understand what the service entails and, more importantly, in what ways they can benefit from it. If an agent only explains a product feature without translating it into a relevant use case for micro merchants,



Accounts graveyard: Why do fintech accounts become dormant?

First, if an **agent stops hand-holding their users.** Many users, especially older users living in rural areas, often feel less confident about doing a transaction without the help of their agents.

Second, if a user is unable to independently use a fintech product or service, s/he is likely to discontinue its use if a problem is encountered and an **agent is unable to help solve the problem.** This includes cases when agents cannot perform a service due to liquidity issues, such as not having enough balance in their accounts to carry out a transaction.

Third, **we found that trust in agents is non-transferable.** Many of the users we talked to stopped using fintech services whenever the agent that initially signed them up quit, although they may be aware of other agents in the area.

Fourth, **there is a network effect in fintech adoption.** Users will be less compelled to use their accounts if there are not enough people in their social network that are also using the same fintech products and services. Users of mobile savings accounts are reluctant to use their accounts to transfer funds if their relatives use a different bank, as this would subject them to administrative fees for inter-bank transfers. On the flip side, food vendors operating in a food court would more actively use a mobile payment account if their neighbouring vendors – and competitors – use the same service, since they risk losing customers if they do not accommodate mobile payments.

Lastly, in most cases, fintech accounts become dormant because **it is used to complement cash, not to replace it.** For many micro merchants, having cash in hand means funds which they can use towards their business or personal life. Money in digital form in their eyes is less accessible compared to their daily transactions with customers and suppliers that are mainly in cash. Furthermore, cashing out digitally stored money is perceived to be impractical.

Four Enabling Factors to Fintech Adoption

Throughout our research, we identified a set of enabling factors that have helped micro merchants to overcome the mental barriers and start using fintech products and services.



The first two enabling factors are fairly logical and address 'rational' barriers. In terms of **accessibility**, one of the main barriers of accessing formal financial services is the distance between where unbanked individuals live and where banks or microfinance institutions are located. The business hours of formal financial services also overlap with the operational hours of micro merchants. Having a fintech agent living in their neighbourhood, especially within walking distance, and having a fintech agent who is available for transactions outside of regular business hours enable more micro merchants to make use of the services.

The unbanked individual often think of formal financial services as expensive, both in terms of transaction and administration fees, as well as interest on loans. The three fintech services we focused on in this research - mobile savings accounts, mobile payment, and peer to peer group

lending - offer either cheaper transaction costs or more flexible repayment terms in the case of peer to peer group lending, therefore they were perceived as **affordable** by the micro merchants we met. The terms and conditions of a fintech product or service matter much more for users than add-on, reward-based incentives such as opportunities to win mobile phones.

We found that the two other enabling factors - trust and appropriate use cases - to be most influential in helping micro merchants to overcome the aforementioned mental barriers to accessing financial services.

Trusted peers help with onboarding the unbanked

Without exception, we found that early adopters started making use of fintech services through trusted peers. For low-income communities, finance is a social activity. They rely on their network of trusted peers in their community - family, friends, neighbours - for informal loans and return the favour. They consider *arisan*, a social gathering that doubles as a rotating savings mechanism, as their main savings method. Therefore, it is not surprising to find that early adopters started using fintech through agents who are their trusted peers or through fintech services that require them to form a group with their friends and neighbours.

Having trusted peers, as we mentioned before, who are also mostly micro merchants themselves, help to mediate their experience with fintech and make micro entrepreneurs feel more secure in adopting new technologies. In cases of mobile savings and mobile payments, users rely on their agents to guide them through the service or even perform the service for them. Other than having help to navigate a new technology, users also tend to feel empowered whenever they see someone who comes from a similar background and have similar skills are able to use fintech.

The peer to peer group lending service we focused on uses a women-only group-lending mechanism to access loans, through which members verify one another and act as each other's sponsors to replace collateral traditionally required for loans. We found that the group lending mechanism feels like a safety net for micro merchants accessing these services, both in terms of having others help cover their repayments when they are not able to, as well as having people who will hold them accountable.

This approach feels similar to *arisan*, a mechanism that the women micro merchants we met are already familiar with.

As micro merchants are uncomfortable in adopting and utilising new technologies, they rely heavily on agents to help them actively use the system, for example by reminding them to repay loans or save money.

Introduce use cases, not product knowledge

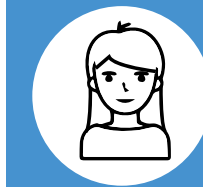
As described in Chapter 2, when presented with the idea of different kinds of fintech services through our sacrificial concepts, many of the micro merchants were overwhelmed and uneasy with the idea of adopting new technology. They admit that the features introduced might be able to help them manage their money and business, but they do not feel confident that they are able to use their phones in new ways. Although we provided visuals for product mock-up that is part of our research tool and walked them through the steps to use it, they often feel overwhelmed by the number of steps required to understand and make use of the range of services offered by an app.

We found that early adopters who were able to successfully adopt fintech made their transition through agents that presented bite-sized specific use cases that meet their needs, instead of introducing them to the entire range of services offered in an app.

In the case of mobile savings accounts, we found that the most attractive use for micro merchants is when they can deposit small amounts of cash (as small as IDR5,000) and can similarly withdraw small amounts of money. This becomes a selling point that agents use to recruit new users and becomes the most-used feature by the users, since this is similar to their *nyisihin* or 'setting aside' practice explained in the previous section of this paper. The transfer feature of mobile savings accounts is also a favorite among micro merchants who have family members living in another city, because they don't have to go to an ATM to transfer funds. We also found cases where shop owners use their mobile savings account to transfer change to their customers, solving the problem of always needing small change for every purchase.

As for mobile payments and peer to peer group lending, we discovered that micro merchants identify appropriate use cases from peers who are also users of the fintech service. To sum up, for micro merchants, a relevant use case matters much more than product knowledge.

Motivated agents are fintech's best friends



-Nira, Sukabumi

"My shop used to have lots of customers, but business has not been so good lately, so I signed up as an agent to get some extra income. I can only cash out my income once every three months, but I don't mind. I understand how the system works so I can work harder in the meantime to get more income!"

The enabling factors that are helpful for breaking mental barriers to fintech adoption depend on agents – the human intermediaries between a fintech service and their users and who are usually micro merchants themselves. Throughout our research, we found highly motivated agents who go above and beyond their tasks to ensure their users are active. They actively try to sign up users beyond their immediate network and play active roles as educator, motivator, and problem solver for their users.

What motivates these high performing agents? While users are incentivised by more lenient terms and conditions for fintech use and access, we found that agents are motivated by reward-based incentives. This is not to say that all fintech companies should offer immediate, easy-to-earn rewards, for instance mobile phones for every 100 new user sign-ups. These types of rewards typically only work in the short run, as most agents approach them to begin with short-term lens and then lose motivation to remain active once they gain the first reward.

We found that motivated agents respond better to **accumulated incentives** that meet the following conditions:

- Incentives that reward active transactions instead of acquisition of new users, for instance a point-based system for frequency of transactions
- Incentives that extend to their family members, such as opportunities for their relatives to also be prioritised as agents in the fintech service ecosystem after reaching a certain milestone.

As long as the **rules of the accumulated incentives are consistently applied**, agents are more likely to remain motivated. Some of the agents we interviewed expressed disappointment or even anger when the rules for gaining long term incentives were changed, they see it as a breach of trust.



From Insights to Design Principles



How can we nudge early adopters to go from only signing up to actively using and benefiting from digital financial services? How might we design solutions that can help micro enterprises in Indonesia become more resilient?



INSIGHT 1

Micro merchants plan for the short term and believe that financial services are only for long term goals.



Atin, Banyumas

“Saving money in the bank means that I can’t touch the money at all, unless there is an absolute emergency.”

As described in Chapter 3, micro merchants spend and allocate money between four time frames: daily, weekly, monthly, and long-term. We found that many micro merchants plan for the short term — money earned today will be spent almost right away or the following day. They tend to set money aside each day with a specific purpose in mind, be it to repay a loan at the end of a week, pay monthly expenses such as electricity or water, or cover children-related expenses. While some micro merchants are capable of managing their short term cash flow, planning for urgent and expected situations such as a death in the family member or a natural disaster is almost non-existent.

We also noticed this short-term planning habit with loan repayments. As money earned is quickly spent, setting aside money for the weekly repayment, rather than monthly, is more desirable for many micro merchants we met. Given micro merchants preference for short-term planning, many of them only start to think about their repayment when the payment due date gets closer, hence gathering a month’s worth of repayment is challenging for many micro merchants.

This short term planning habit also explains how micro merchants perceive financial transactions with formal banks; they typically see them as being only necessary for long term goals. Savings in a bank is only for the “untouchable” money. As for bank loans, almost all of the micro merchants we met were fully aware that they are not likely to be meet qualification criteria for a bank loan, and therefore do not even want to take the first step to find out about loan application procedures.



INSIGHT 2

Fintech mobile savings account is used as a temporary wallet



Supi, Bekasi

“The agent explained to me the benefits of having a savings account on my phone. I can deposit small amounts of money, and that is the main reason why I want to join. But once I have enough money on my phone account, I usually then transfer it to my bank account.”

With the emergence of mobile savings accounts, several micro merchants are now setting aside and saving money more frequently. There are three reasons for this. First, the micro merchants we met found mobile savings accounts attractive as they can deposit small amounts of cash. Second, saving money becomes easier since agents are located near where the micro merchants live or work, usually within walking distance. Finally, agents remind them to save, thus prompting them to save more frequently.

We found however, that mobile savings accounts are usually used as a “temporary wallet.” Many micro merchants reported that they used their mobile savings account to save frequently for a specific purpose, ranging from sending money to relatives at home to saving up to move back home. Once the savings have accumulated to a certain amount, these micro merchants will either withdraw the amount collected or transfer it to another bank account (usually within the same bank used by the receiving end of their money transfer). We found similar use for a savings account when we interviewed the borrowers of the peer to peer group lending. They expressed interest in a savings account, but instead for long-term savings, they would like the account to be linked to their loans, and use it to set aside money to pay their debts.



INSIGHT 3

Agents and fintech users view each other as people, not functions



Ina, Bekasi

"I only go to the agent that signed me up, not to any other agents nearby. I know my agent very well, he's my cousin."

There is a strong, trust-based relationship between the agents and the users, and agents rely on this familiarity to recruit and maintain users. This is unsurprising, since finance for the lower income community is seen as a social activity. As a result, users often see agents as 'neighbours who can help' instead of a 'representative of a formal financial institution'. While this is beneficial for the purpose of recruitment and maintenance of users, a few unintended consequences have emerged.

First, the personal nature of the agent-user relationship may result in insecure practices. Many users trust the agents enough to share passwords or leave cash with their agents. The same goes for mobile payment services and the collection point of peer to peer group lending. When an agent cannot solve the user's problem, users often do not put effort into seeking the help of other agents, or contacting the fintech service provider.

Second, some agents are 'protective' and mindful of the users' needs. Therefore, instead of promoting features that might be beneficial to the users in the long term, they often do not want to burden users by introducing new features that are seen as complicated. Consequently, users might be missing out on opportunities to use services that may be able to meet their latent, unexpressed needs.



INSIGHT 4

Social norms influence decision-making



Asti, Banyumas

"In this area, everyone borrows money. So when my neighbour asked me to join the group lending scheme, I thought : why not?"

Family and friends are the main influencers in a micro merchants' decision to save or borrow money, as well as from where to save or borrow money. Some micro merchants used peer to peer group lending as this lending mechanism is well known in their community, hence trust in this mechanism tends to be high. We also found however, that some "conformers" borrowed money simply just to follow the footsteps of others in their neighbourhood. Group lending requires merchants to form a group and have a face-to-face gathering regularly. To these conformers, the face-to-face gathering is more than a requirement or accountability mechanism. It is also an important "not to be missed" social event where they catch up with other merchants and exchange information in a laid-back atmosphere.

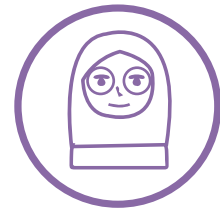
In terms of mobile savings services, as described in Insight 3 (Agents and fintech users view each other as people, not functions), agents play a big role in the recruitment process and keeping the users active. In the worst case scenario, some users signed up for fintech services out of the desire to help or to not disappoint their peers who act as agents. Agents use this persuasive tactic not only to recruit users, but also to keep the users active. We met motivated agents who would walk around every day to persuade users to set aside money in their mobile accounts.

Other than agents, micro merchants' business partners, such as goods distributors or suppliers, were persuasive in convincing micro merchants to adopt a financial service. We met a few micro merchants who opened an account under the same bank as their business partners to comply with these partners' requests or to avoid inter-bank transfer fees.



INSIGHT 5

It is all about convenience, not about risks or costs



- Sunarti, Ciseeng

"If I borrow money through the peer to peer group lending, I do not need collateral. The only collateral needed is myself."

Micro merchants prefer convenience over cost. This is particularly strong for the peer to peer group lending service, especially when it comes to ease of acquiring a loan. While banks usually require borrowers to have a credit history, collateral or a permanent job, peer to peer lending is more convenient for micro merchants as it does not require administrative requirements or collateral.

Another important parameter for peer to peer group lending is how much the merchants have to re-pay weekly, rather than the interest rate or expected return/profit after using the loan. When asked about their interest rates, many micro merchants could not mention the rate. They replied in terms of how much they have to pay for a week and judge their decision for taking a loan based on the weekly repayment amount. If they can afford the weekly repayment, independent of the interest rate requested, they consider the loan to be affordable.

This is not to say that micro merchants do not weigh the options available to them. We found that they compare the payment terms of a peer to peer group lending with lending from cooperatives of microfinance institutions in the area, which usually ask for bi-weekly or monthly repayment terms. Even when the amount of a weekly repayment scheme to peer to peer group lending is slightly higher than the amount for a bi-weekly or monthly repayment, many micro merchants still consider the weekly scheme to be more convenient.

"I save cash money at home. It is convenient as I can easily take it when I need it. If I deposit money in the bank, I'm going to waste time walking to the ATM when I need to pay expenses." - Wati, Bekasi.

We see the same pattern in savings habits. Less than half of our respondents (or their spouses) have bank accounts, but all of them save cash at home. Although this is risky, especially if there is a theft or natural disaster, the practicality of dealing with cash is more of a priority for micro merchants.



INSIGHT 6

Agents and users rely on oral communication



- Tika, Banyumas

"Here is the new brochure about the service, but I haven't read it yet. I prefer to wait until I meet the field officer. It works better for me, since the field officer can explain the content and I can immediately ask her if I have questions."

Most micro merchants are reluctant to read brochures or information given in the digital financial service. They rely on one-on-one approach where the agents, usually a trusted peer, teaches and guides them during the sign-up process and throughout their use of the service, since they 'speak the same language'.

The same communication pattern also goes for the agents. We found that most agents learned about a new product through a fintech company's field officers who came to their shop and explained the product to them. Agents admitted they have agent-only apps installed on their phones, through which they can read information on the product, tips to get optimum incentives, and troubleshoot. However they prefer oral communication to reading through the explanation on the app.

Interestingly, our research shows that agents are more open to learn new information that is introduced through agent-only Whatsapp groups. The informal language, along with the interaction in a Whatsapp group where people can ask questions, share stories, or even joke about the service, makes new information feel less intimidating. Another effective method we also saw was user education using videos. When enticing potential users to sign up, showing them videos about what the products are for and how they work was more effective than giving them paper brochures.



INSIGHT 7

Incentives matter



Ranti,
Sukabumi (agent)

"I don't mind finding new users for this service and help users do their transactions, but I need to know clearly what I will get in return. It's tiring, the reward has to be worth my time."

In interacting with fintech, micro merchants play a role as users or agents of fintech. Incentives matter for both roles, but in different ways.

For micro merchants who are users of fintech, incentives that work best are embedded in the terms and conditions of the service itself. As emphasised in Insight 5 (It is all about convenience, not about risks or costs), if the service shows that they offer more convenient terms than other options available for them, micro merchants will want to sign up. One-off rewards like the opportunity to win cars or mobile phones may entice micro merchants to sign up, but they are less likely to become active users in the long run.

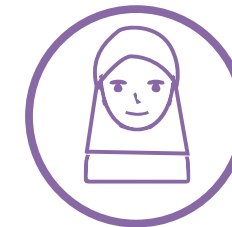
When asked about the reasons why micro merchants are interested in becoming fintech agents, most of them admitted it was for the incentives. Most of the less active agents we interviewed signed up for the immediate, easily attainable reward, such as mobile phones or cash after recruiting a certain number of users. The active agents, however, are more concerned about accumulated incentives and how it translates as an additional income or opportunities, for instance if their relatives could be prioritised as agents in the fintech service ecosystem after they reach a certain milestone.

In particular, consistency in rules of incentives attainment matter for active agents. The change of incentive system could become a problem when incentives are not worth the amount of effort the agents have to put in to maintain users, or when it is seen as a breach of trust.



INSIGHT 8

Privacy and security are non-issues



Susan, Sukabumi

"I transferred money using my mobile account regularly to my son who lives and studies in Jakarta, but I actually do not know how to do this myself. So each time I need to transfer, I just give my phone and my PIN to my agent and he will take care of it."

Micro merchants consider financial services through technology effective and efficient. Again, related to Insight 3 (Agents and fintech users view each other as people, not functions), support in using the services however is very much a personal approach. For the users of mobile savings accounts, some micro merchants are not hesitant about leaving their money with the agents without checking whether or not the money is deposited immediately. In the worst case scenario, micro merchants will also share their password with the agent as they ask for help to do the transaction.

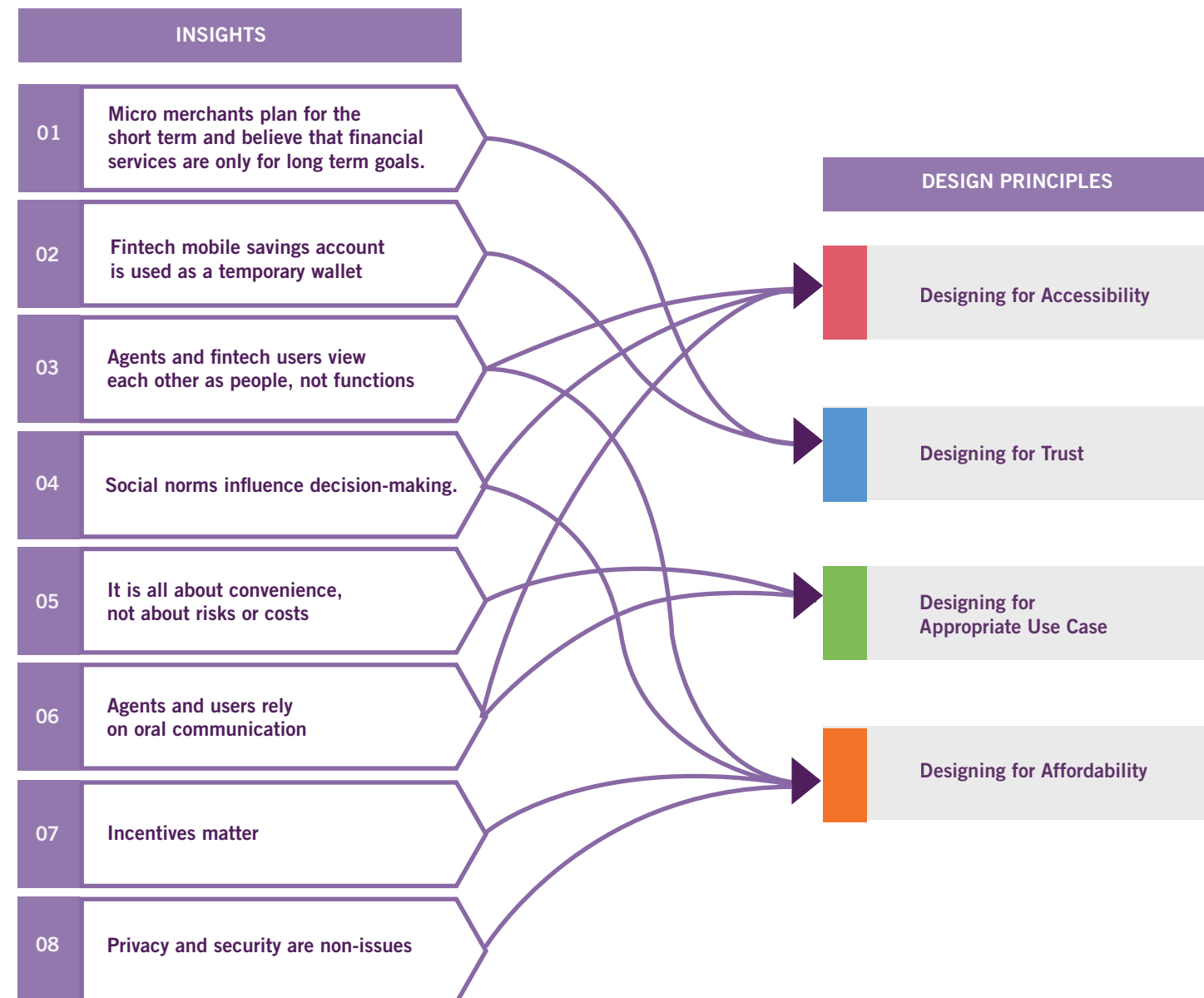
In the case of peer to peer group lending, once a merchant is officially a borrower, she will be equipped with a QR embedded book that records her loan and repayment history, which is meant to help a borrower keep track of her payments. The borrowers, however, only see the book as a requirement to do repayments instead of a private record of their loan activities. They are not aware of the privacy and security concerns embedded in the book, so they often leave the book with an agent and pick it up a few days after.

In spite of these insecure practices, we did not hear of any cases of abuse of trust by agents during our research. However, understanding the concept of privacy and literacy in consumer safety and protection protocols are imperative for micro merchants, as is for any user of fintech, to reap the benefit of using financial services.

From insights to design principles

After researching the micro merchants' experience of adopting three different digital financial services, we discovered many latent needs for fintech. Users of a mobile payment system could benefit from access to microloans, users of peer to peer group lending would find mobile savings accounts really useful, and there are opportunities for fintech that provides support in digitising payment to suppliers, financial literacy, or basic business management. Our research also demonstrated that **how fintech is introduced and implemented are more influential than details of the technology itself in a micro merchants' decision to adopt a**

digital financial service. Therefore, rather than recommending product or service ideas, we opt to translate our insights into design principles. The design principles embody our understanding of the finance and technology-related attitudes and behaviors of micro merchants, particularly the enabling factors that equip them to adopt digital financial services. These principles could be applied by fintech companies as design directives in developing and testing a variety of solutions for micro enterprises in Indonesia.



Designing for Accessibility

Access has often been cited as the main reason why micro merchants remain unbanked. For them, accessibility means much more than the distance between their homes and the location of a financial service, or if the hours of the service is flexible enough to accommodate their needs. It also means that micro merchants have access to information that is given in a way that makes them feel confident that they understand what the service is about and the requirement it entails.

We found that accessibility is especially challenging for several segments in the micro merchants community, such as the elderly, women living in rural areas, and semi-literate merchants (those who are able to read and count to make sure their business stays afloat, but uncomfortable to do more sophisticated tasks such as reading long texts or calculating profit and loss of their business). These groups require a tailored communication approach, or at times a specific scheme, to make them feel that a digital financial service is accessible for them.



In practice, designing for accessibility could mean:

Engaging human intermediaries instead of relying only on technology

We found that successful adoption starts with trusted peers who act as human intermediaries between a financial service and its potential users. These agents, usually members of the same community as the target users, play a fundamental



role in making a digital financial service feel accessible by introducing the service in a language that potential users can understand. This strategy has been used by almost all fintech companies targeting the lower income communities, usually by engaging micro merchants as agents themselves.

Creating community based activation events to promote brand awareness

One of the main challenges for agents in recruiting users is that people have never heard of the fintech brand before. Although many agents we talked to were able to recruit their neighbors and relatives as users in spite of this, a fintech company could help them by increasing their brand awareness through local campaigns that engage local influencers, such as radio hosts.

Tailoring introduction to fintech for specific groups of potential users

Out of all the micro merchants we met, older men and women in rural areas and those who are semi-literate are much less likely to access formal financial services or fintech. Creating tailored communication schemes to introduce a digital financial service for this target group can help micro merchants to realise that the service is more accessible. Designing specific schemes for these groups could also improve accessibility of a digital financial service, if a fintech company wants to go the extra mile.

Insights:

- 03 Agents and fintech users view each other as people, not functions
- 04 Social norms influence decision-making.
- 06 Agents and users rely on oral communication

Designing for Trust

Trust is a theme that constantly appeared in our conversations with micro merchants. As is the case with accessibility, for users of digital financial services, trust is embodied in agents, trusted peers who act as the human interface of a digital financial service. Micro merchants also need to trust their ability to use the technology to adopt them, although in many cases they will place their trust in the agents' ability and willingness to help them use the service. For micro merchants who act as fintech agents, they also need to trust the brand and the incentive system applied by the company to have enough motivation to perform their role. Trust building between agents and brands grows gradually, since their relationship is often lacking human intermediaries who are trusted peers of the agents.

In practice, designing for trust could mean:

Collect and share success stories from fellow micro merchants

Showing real stories of how micro merchants could use a digital financial service to help run their financial and business management can attract potential users to sign up and encourage existing users to be more active in using the service. The stories could be as simple as photos and a short text disseminated through Whatsapp or other existing communication channels used by micro merchants in their community.

Providing free or low-cost communication channel for agents to connect to a helpline in the fintech company

The adoption journey in Chapter 3 illustrated that many users stopped using a digital financial service when their agents failed to troubleshoot, which means that they no longer trust the agents to help them to use the service. A main barrier for agent to address user problems is that they do not know who to contact for help in troubleshooting, or if they do, calling the agent helpline is often too expensive.

Insights:

- 03 Agents and fintech users view each other as people, not functions
- 04 Social norms influence decision-making.
- 07 Incentives matter
- 08 Privacy and security are non-issues



Building trust through incentives

Another important take away from our study is the incentives for retention. Not surprisingly, incentives play a big role in retention if they are given to both agents and users. The current practice right now focuses on: (1) giving incentives mostly to agents rather than the users and (2) focus on users' sign up rather than retention. In terms of setting up incentives, there are a few recommendations that can be considered:

Type of incentives

Short term incentives: We found direct incentives for users in the form of goods, e.g. a mobile phone upon sign-up, is only useful for sign-up but not for retention. To encourage user retention, it is useful to think of immediate incentives as setting the terms and conditions of the fintech service to be more affordable, faster, or convenient compared to existing alternatives available in the community, e.g. cheaper inter-bank transfer fee for mobile savings accounts, more lenient repayment terms for peer to peer lending, or emphasizing that using mobile payment systems will alleviate the need to always have small change ready, a major pain point for micro merchants.

Long term incentives: Long term incentives could work in two ways, an accumulated incentive that builds over time and a one-time milestone reward. In terms of accumulated incentives, we found that rewarding transaction frequency works better to encourage retention rather than rewarding use of a variety of features within a digital financial service. As for long term milestone based incentives, instead of introducing incentives like umrah or cars, we found more effective results for retention when the incentives introduced provide benefits for family members (e.g. frequent use would give the chance for your family member to become an agent) or access to other services (e.g. good savings track record means faster access to micro loans).

A tier-based system for agents

Users and agents do not respond well when the rules of incentives are changed. When incentives are more difficult to attain, agents become demotivated and could potentially drop out of their roles as agents—and which consequently affects their users.

We see an opportunity to test a tier-based incentive system for agents, which could offer both stability in gaining rewards and possibilities to nudge agents to perform new functions once in a while. The first tier is a permanent system that rewards basic transactions, for instance a points-based system based on transaction frequency. The second tier could be a periodic incentive system that offers a higher reward to perform new or more complex services.

For example, in the case of mobile savings accounts with a points-based reward system for agents, a first tier incentive could take the form of small points for each time a basic transaction is performed, such as saving and transfers. The second tier incentive could reward bigger points for more complex transaction features, for instance electricity payments for three months and switching to water bill payments for the next three months.

Having consistency in how incentives are given helps agents feel reassured that they understand how the incentive system works and gives more confidence to perform new functions from time to time.



Designing for Appropriate Use Case

Micro merchants respond much better to specific use cases than introduction to product knowledge, which they often find overwhelming. Appropriate use cases are usually immediately relevant to the daily habits of micro merchants, so the behavior change required to adopt the digital financial service is not too drastic. They also work better in convincing micro merchants to adopt a digital financial service when agents introduce them in bite-sized pieces.

In practice, designing for appropriate use case could mean:

Working together with agents to come up with, collect, and disseminate appropriate use cases

We found that it is agents who come up with appropriate use cases of a digital financial service, not the fintech companies. Agents are best positioned to identify appropriate use cases since they share similar habits and constraints as their users, but not all of them actively do this. Fintech companies encourage and facilitate agents to come up with use cases, collect them, and share them across the agents network.

Taking into account micro merchants' financial activity habits into product design

For example, 'savings for a purpose' (*tabungan bertujuan*) is a common concept in banking, but the purpose is usually set for big-ticket, long term goals that are beyond the horizon of micro merchants, such as savings for higher education. The concept could work better if applied as 'savings for led' or 'savings for pulang kampung' for micro merchants.

Insights:

- 01 Micro merchants plan for the short term and believe that financial services are only for long term goals.
- 02 Fintech mobile savings account is used as a temporary wallet

Designing for Affordability

What micro merchants perceive as affordable depends on the context of their lives. Comparing the terms and conditions of a digital financial service with a bank's is not always persuasive for micro merchants, since they are less likely to consider banks as a viable option especially when it comes to loans. Micro merchants also compare a digital financial service against other options that are accessible to them, such as micro-finance institutions, cooperatives, loan sharks, and arisan.

In practice, designing for affordability could mean:

Defining affordability as more than cost

From a service provider perspective, cost is the most obvious way to think of affordability, but as explained in Insight 5, micro merchants also define affordability based on time frames. Since their financial cycle is so short, as described in Chapter 2, it is much easier for them to fulfill shorter term financial obligations. In the case of peer to peer lending, weekly repayment terms are seen as more affordable than monthly, even if the interest rate for weekly repayments is slightly higher compared to a monthly scheme offered by a microfinance institution.

Encouraging cash light instead of cashless practice

'Cash is king' mentality is pervasive among micro merchants, not only because cash is ubiquitous but also because micro merchants earn too little to afford setting aside their cash reserve digitally. Encouraging a 'cash light' practice could mean creating an ecosystem where digital money has significant in-and-out-flows. For instance, a mobile payment system that can be used by micro merchants to receive payments from customers and pay their suppliers will have more chance of being used than a system that is only used for customer transactions.

Insights:

- 05 It is all about convenience, not about risks or costs
- 06 Agents and users rely on oral communication

Policy domain: consumer protection and education

Although our research focuses on highlighting areas where fintech companies could make a difference, we continuously come across policy themes that regulators in the fintech space, Bank Indonesia (BI) and the Financial Services Authority (OJK), have discussed as a priority agenda: consumer protection and financial literacy education.

Based on our research and in line with the regulators agenda, we recommend that policy makers improve consumer protection and education by:

Utilising disclosure regimes to support financial literacy and consumer protection

Instead of thinking of financial education as specific training or campaigns, policy makers could set disclosure regimes - regulation, guidelines, and enforcement to increase transparency and consumer protection (Chien, 2012) - that would encourage fintech companies to acquire consumers in a way that increases their comprehension of financial services or products. This means not only thinking about what information should be disclosed but also how information about the service should be communicated to the targeted users.

We found many micro merchants do not fully understand the consequences of adopting a financial service. Like most of the low income communities, they do not read terms and conditions in a fintech app, brochure, or contract irrespective of their literacy level. Policy makers could encourage fintech companies to provide simplified information on their terms and conditions and understanding the risks and consequences embedded in the service, including making them available in local languages. This should also be applied to information on what fintech companies do with the digital financial footprint that users leave in their system (Mazer, Carta and Kaffenberger, 2014).

Integrating privacy and security literacy into the financial literacy agenda

Our research found that users do not have basic understanding about privacy and data security, resulting in high risk behaviors such as sharing of passwords. The concept of privacy and security should be integrated into the financial literacy education agenda, since the understanding of these concepts are critical to ensure proper use of any financial service.

Regulating peer to peer lending interest rate²

Peer to peer lending often applies a higher interest rate than banks (The Insider Stories, 2018). There are two reasons for this: 1) to cover the high operational cost, and 2) it is used for risk management, since many borrowers have no credit history and do not give collateral for their loan. There is currently no standard for peer to peer lending interest rates in Indonesia, which results in a wide variety of interest rates offered by peer to peer lending services. To avoid loan shark like practices that would further disbenefit low income communities, policy makers should consider setting a ceiling for peer to peer lending interest rates and encourage companies to be more transparent in terms of their risks, fees, and interest determination.

Simplifying KYC to enable wider access

The Indonesia Fintech Association listed a more flexible, digital know-your-customer (KYC) regulation as a priority to catalyse fintech for financial inclusion (AFTECH, 2018). We are aware that our research is conducted in Java, but most of the unbanked micro merchants who would benefit the most from fintech are located in remote areas in Indonesia and a simplified KYC mechanism would make digital financial services more accessible to these groups.

¹ See, for instance, *The National Strategy for Financial Literacy in Indonesia* (OJK, 2017: [https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Documents/Pages/Strategi-Nasional-Literasi-Keuangan-Indonesia-\(Revisi-2017\)-SNLK1%20\(Revisi%202017\).pdf](https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Documents/Pages/Strategi-Nasional-Literasi-Keuangan-Indonesia-(Revisi-2017)-SNLK1%20(Revisi%202017).pdf)) and *Strategy for Financial Service Consumer Protection*

(OJK, 2013: [https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Documents/Pages/Strategi-Perlindungan-Konsumen-Keuangan-Tahun-2013-2017/Strategi%20Perlindungan%20Konsumen%20Keuangan%20\(SPKK\).pdf](https://www.ojk.go.id/id/berita-dan-kegiatan/publikasi/Documents/Pages/Strategi-Perlindungan-Konsumen-Keuangan-Tahun-2013-2017/Strategi%20Perlindungan%20Konsumen%20Keuangan%20(SPKK).pdf)). Regulating peer to peer lending interest rate is already in the regulators' agenda. See <https://www.reuters.com/article/us-indonesia-fintech-regulator/indonesia-eyes-fintech-regulation-to-avoid-loan-shark-like-practices-idUSKCN1GP10B/>.



The Road Ahead



“The missing ingredient in financial inclusion is customer centricity - putting customers first, understanding what they want and need, communicating with them at every point, learning from them.”

Queen Maxima, United Nation Secretary General's Special Advocate for Inclusive Finance for Development



Although the majority of micro merchants in Indonesia are currently not accessing formal financial services, our research on the experiences of early adopters of mobile savings accounts, mobile payments, and peer to peer group lending in Java indicate that fintech has the potential to accelerate financial inclusion within this cohort. How has fintech changed or supported micro merchants' business and daily lives? How might we utilise fintech so micro merchants can access financial services and grow to be more resilient?

Changing financial management behaviours

It is too early to demonstrate the impact of using digital financial services for micro merchants, not only because our research is focused on Java and because it is not aimed at being statistically representative, but also because the fintech industry has only started significantly developing in Indonesia since 2015 (AFTECH, 2017). We also acknowledge that micro merchants who are fintech early adopters vary in terms of age, technological savviness, and how active they are in using digital financial services. However, despite all the limitations, in our research we see some signs of financial behaviour changes among micro merchants after using fintech, which could bring a bigger impact to their lives in the long term.

Users can be nudged to use digital financial services more frequently

The 'cash is king' mentality is alive and strong, but micro merchants can be nudged to use digital financial services more frequently. Agents play the biggest role. By introducing relevant use cases and acting as a reminder system, users are more inclined to use digital financial services more frequently. Incentives, which we have discussed in detail in

Chapter 4, can also nudge agents and users to use digital financial services more often. Lastly, micro merchants are willing to actively use fintech if it supports their business. For instance, tech savvy micro merchants in urban areas are eager to use mobile payments if it could help them broaden their customer base. The more users of digital financial services in the area, the more reasons for micro merchants to use them.

Loans are used not only for business but also as cash reserve for emergencies

Most micro merchants we talked to started their business using their own money or borrowed capital from their immediate network, such as family or friends. However, when the business grows and they cannot rely on their immediate network anymore, they resorted to a lending mechanism that is known and trusted to them. In our research, initially most borrowers took credit from a peer to peer group lending to run their business, but they will keep any amount remaining as a cash reserve to deal with emergencies, such as illness in the family, or when dealing with irregular income.

For women, a loan gives them the opportunity to become the main or secondary income earner

We found many women micro merchants started their shops as a way to earn extra income for their family, but find it difficult to sustain or grow their business without a loan.

The majority of micro merchants do not qualify for formal loans, but it is especially challenging for women merchants in rural areas. Fintech allows these women access to microloans with very few requirements and a lot more flexibility than the alternatives available to them, such as loan sharks. The loans allow women micro merchants to sustain their business and earn enough money to cover the family's day-to-day expenses. Whether they are the primary or secondary income earners, women micro merchants use loans to contribute to their family's income while still having the flexibility to work at home and take care of their children.

Going forward: integrating the social side of finance into fintech

The growing fintech industry in Indonesia is starting to reach micro merchants. Agents, the human intermediaries between a fintech service and its users, are essential in breaking barriers to fintech adoption. They play active roles as motivators to join the service, as well as educators and problem solvers in using the service. However, despite the help of agents, the problem of fintech services is not in the user adoption, but in retention.

Retention will only occur if fintech services have a positive impact on micro merchants' business and daily lives. Mobile savings accounts where users can deposit a small amount of cash were found to be very useful by the customers. Peer to peer lending definitely presents a strong use case as most micro merchants are unable to access capital from formal institutions. As for the payments service, micro merchants see the potential of using this service in the long run, as it allows them to reach out to more customers.

Our research does not focus on the type of fintech service needed to be developed, but looks more into how we should design a fintech service to be able to reach the micro merchant segment. We highlight four design principles that are essential in fintech adoption and retention, which any kind of fintech service should embody. Fintech information should be made **accessible** (including for the most challenging user segment - the elderly, women living in rural areas, and semi-literate merchants), fintech companies should build **trust** (embodied in its agents and brand), provide



appropriate use cases (that are relevant to the daily habits of micro merchants) and fintech services should be **affordable** (for merchants whose money earned is quickly spent, time could be more important than cost).

Finally, our research highlights that finance is a social activity for micro merchants, as it is for most of the unbanked communities in Indonesia. This is extremely different from the individual approach used by the middle and upper class, the segment that financial and fintech actors are used to addressing which is to consume technology and financial services. For one, while middle and upper class consumers are willing to learn new service features that may benefit them, unbanked micro merchants tend to stick to a few use cases they are comfortable with and avoid being exposed to multiple features because they find the experience overwhelming. Micro merchants also tend to rely on their agents and peers so much that they are willing to share passwords, a high risk behavior from a security perspective. Privacy and consumer protection is already a priority agenda for policy makers in the fintech space, but a policy approach that takes into account the social aspect of finance and the unbanked community's reliance on their peers is required to realise the potential of fintech for the financial inclusion of this cohort.

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Acronyms

ATM	Automated Teller Machine
BSA	Basic Savings Account
BI	Bank of Indonesia
DFS	Digital Financial Services
FMCG	Fast-moving consumer goods
GDP	Gross Domestic Product
KYC	Know Your Customer
MFI	Microfinance Institution
MFS	Mobile Financial Services
MSME	Micro, Small and Medium-Sized Enterprises
OJK	Otoritas Jasa Keuangan (Financial Services Authority of Indonesia)
PDA	Personal Digital Assistant

Glossary

Adoption: The process of choosing, acquiring, and using a new invention or innovation

Agent: Any third party acting on behalf of a bank or other [fintech service] provider to deal directly with customers. Agents are typically located in retail locations (such as pharmacies, small stores and gas stations), and receive a commission for services performed, such as cash-in, cash-out, transfers, and customer registration

Banked: People who own accounts in bank

Digital financial services: The broad range of financial services accessed and delivered, through digital channels, including payments, credit, savings, remittances and insurance. The digital financial services (DFS) concept includes mobile financial services (MFS)

Digital financial footprints: financial data history consumers accumulate through transactions and other behaviors that are conducted via digital channels.

Fast-moving consumer goods: Retail products that are sold quickly and at relatively low cost. Examples include non-durable goods such as soft drinks, toiletries, over-the-counter drugs, processed foods and many other consumables.

Fintech: Financial technology refers to the use of technology and innovative business models in the provision of financial services

Full financial inclusion: A state in which all people have access to a full suite of quality financial services, provided at affordable prices, in a convenient manner, and with dignity for the clients. Financial services are delivered by a range of providers, most of them private, and reach everyone who can use them, including disabled, poor, rural, and other excluded populations. Financial inclusion is often validated by the percentage of (adults) population having a bank account. However, as having access to a financial service does not equal active usage, the Global Findex uses both access and use of financial services as indicators to measure financial inclusion.

Know Your Customer: Also known as client due diligence. A standard form is used to establish clients' risk tolerance, investment knowledge, and financial position.

Laku Pandai: Referred as mobile savings account in our report. A branchless banking program in Indonesia, aimed at providing basic financial services, such as opening of bank account, deposits, withdrawals, money transfer etc. through agents.

Micro enterprises: In Indonesia, it is defined as productive businesses owned by an individual and/or group of individuals that have net assets worth a maximum of IDR 50 million (not inclusive of land and buildings where the business is located) or an annual sales revenue that do not exceed IDR 300 million.

Microfinance Institution: An organization that offers financial services (such as loans, insurance, and deposits) to low-income populations.

Micro merchants: Individuals who work in or own a micro enterprise.

Micro, Small and Medium-Sized Enterprises: A group of enterprises ranging from the smallest business entities to medium-sized businesses, as defined by each country. In Indonesia, small enterprise is defined as an entity with an annual revenue within the range of IDR 300 million to IDR 2,5 billion, while medium enterprises are those earning between IDR 2,5 billion to IDR 50 billion.

Mobile Financial Services: The use of a mobile phone to access financial services and execute financial transactions. This includes both transactional services, such as transferring funds to make a mobile payment, and non-transactional services, such as viewing financial information.

Mobile payments: Payments for goods, services, bills and invoices with a mobile device (such as a mobile phone, smart phone, near field device, PAD or personal digital assistant (PDA)) from one or more sources of stored value by taking advantage of wireless, near field and other communication technologies. Mobile devices can be used in a variety of payment scenarios, such as payment for digital content, services, goods, or to access electronic payment services to pay bills and invoices.

Peer to peer lending: A platform that allows consumers to lend and borrow and to do so in very small amounts. When these loans are intermediated by a peer-to-peer lending platform, a third party handles credit scoring, loan origination and collections, and shares a portion of the profits with the lender.

Peer to peer group lending: A peer to peer group lending strategy where joint liability is used as peer monitoring to ensure timely repayment of loans.

Unbanked: People who do not own a bank account. In our research, unbanked include customers of non-bank microfinance institution (MFI) either formal or non formal.



PULSE STORIES

Banking on Fintech: Financial Inclusion for Micro Enterprises in Indonesia