

Policy Paper No. 23 Chinese Investments in Indonesia's Fintech Sector:

Their Interaction with Indonesia's Evolving Regulatory Governance

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INTRODUCTION

This paper analyzes Chinese investment in the financial technology (fintech) sector in Indonesia, which ranges from payment systems to lending to wealth management. It will specifically address fintech lending both by Chinese investors and their domestic partners as a major source of controversy in Indonesia. It elaborates on how Chinese investors respond to the evolving regulatory environment in Indonesia and addresses local debates over the intentions and structure of Chinese investors in the Indonesian fintech sector, comparing those debates to the actual situation of Chinese FDI in Indonesia.

In spite of the controversy facing Chinese investment in Indonesian fintech, especially in the area of payday loans, there is insufficient evidence to conclude that the problems with the industry are the result of Chinese investment bringing bad business practices and governance to Indonesia. Instead, the problems can be explained by the nature of the industry, Indonesia's rapidly expanding middle class, and regulators that must react to problems as they arise rather than controlling innovation to allow the market to meet consumer needs.

INDUSTRY OVERVIEW AMIDST THE EVOLVING REGULATORY ENVIRONMENT

A. A Growing Middle Class and A Legging Traditional Financial Sector

Despite large data discrepancies that make it difficult to measure, it is safe to assume that Chinese foreign direct investment in Indonesia has been growing significantly. Indonesia's Investment Coordinating Board (*Badan Koordinasi Penanaman Modal*, or BKPM) announced that Indonesia received \$2.7 billion¹ in foreign direct investment from China in 2016. When FDI from Hong Kong is included, this figure rises to an unprecedented \$4.9 billion. In 2017, China overtook Japan and now trails only Singapore on the BKPM list of Southeast Asian countries investing in Indonesia. Although China's investment fell to \$2.4 billion in 2018, behind Singapore (\$9.2 billion) and Japan (\$4.9 billion), BKPM did not include investment from Hong Kong (\$2 billion) in this figure, and a significant amount of Singaporean investment is assumed to have originated from China (van der Eng, 2018).

Chinese investment occurred in the electricity sector, where it funded the construction of power plants and supporting facilities, such as ports, and increased in Indonesia's downstream industries, mainly nickel smelters. Much of this investment is related to China's Belt and Road Initiative and both governments have agreed to joint infrastructure projects in three Indonesian provinces specifically designated for Belt and Road investment: North Sumatra, North Kalimantan and North Sulawesi. But there is a third sector in which private Chinese companies have invested heavily and which draws considerable attention in Indonesia: Fintech financial technologies, or fintech. These businesses are dominated by electronic/

financial technologies, or fintech. These businesses are dominated by electronic/ digital payment (e-payment) systems and online/digital lending, popularly known in Indonesia as "fintech lending".

In addition to these two major fintech sub-sectors, major fintech players operate to a lesser extent in the financial marketplace,² artificial intelligence (AI), big data for financial services (e.g., credit scoring), and wealth management (including roboadvisory). Fintech has flourished in Indonesia, especially since 2016, in part because Indonesia's more traditional financial industry cannot keep up with the growth of the middle class and its increasing demand for technology-based services. Fintech has flourished in Indonesia, especially since 2016, in part because Indonesia's more traditional financial industry cannot keep up with the growth of the middle class and its increasing demand for technology-based services.

On one hand, digital adoption is growing at a rapid rate. The majority of Indonesia's almost 270 million citizens are under the age of 35, and a study by *We are Social* in 2019 shows that the total number of active internet users in Indonesia reached 150 million, 56% of the total population, with 13% annual growth in users from 2017 to 2018. Mobile internet (smartphone) penetration is also high in Indonesia (We Are Social and Hoot Suite, 2019). A study from Morgan Stanley shows

¹ Unless otherwise specified, all dollar amounts are in United States dollars

² The financial marketplace here refers to the platform through which financial products including insurance, mutual funds, credit cards, and personal loans from banks are sold.

that Indonesia's smartphone penetration steadily rose from 28% in 2014 to 54% in 2017, which is similar to China's at 52% in 2014, and double India's level in 2017 (Morgan Stanley, 2019). An estimated 60% of the adult population owns a smartphone and the total number of active mobile internet users reached 142.8 million in 2019, representing 53% of the total population (We Are Social and Hoot Suite, 2019). In a recent Boston Consulting Group survey (Morgan Stanley, 2019), 88 million people—35% of the population—were designated as middle-class, affluent consumers who regularly spend more than \$140 per month on food, utilities, communications, and regular household supplies. By 2020, this number is expected to reach 141 million, or 53% of the country.

On the other hand, penetration by the traditional financial sector is lacking. The 2018 World Bank Findex Report shows that only 49% of Indonesian adults have savings accounts with a bank (World Bank, 2018), is an increase from 2014 when the survey found only 36% of adults had savings accounts. In a market with nearly 270 million people, approximately 17 million credit cards were held in Indonesia in March 2019, up only slightly from 2012, when about 14 million were in circulation. These approximately 17 million cards are held by approximately 10–11 million individuals, only 6% of the total adult population. Financial access touch points between customers and traditional financial institutions are also lagging behind demand, in part because Indonesia's archipelagic nature makes it challenging to service all geographic locations. There are only about 38,000 bank branches, about 109,000 ATM machines, and around 500,000 merchants that can accept card payments (Indonesia Fintech Association, 2018).

Financial access touch points between customers and traditional financial institutions are also lagging behind demand, in part because Indonesia's archipelagic nature makes it challenging to service all geographic locations. There are only about 38,000 bank branches, about 109,000 ATM machines, and around 500,000 merchants that can accept card payments (Indonesia Fintech Association, 2018).

All of these conditions in the Indonesian financial market are signs that the country needs more efficient financial products (whether for saving, payment, or loans) that are cardless and branchless—in other words, less physical and more digital. The best way to accomplish this is by leveraging smartphone penetration. The strong appetite for consumption among the middle class has been fueled by easy access to online loans and aggressive marketing behavior of payment platforms. Fintech companies looking to expand in Southeast Asia would be remiss if they were to overlook Indonesia scene as a potential market.

Despite the bullish fintech market, fintech in Indonesia has a negative public image. In March 2018, Wimboh Santoso, the newly appointed Chairman of the Indonesian Financial Services Authority (OJK)³ for the first time raised the issue of addressing through regulation the ultra-high interest rates of 1–2% per day at which some fintech lenders offer cash payday loans. From July

³ The government agency that oversees Indonesia's financial services industry and grants registration and licenses for fintech lending businesses.

through December 2018, a series of protests and mass rallies throughout cities in Indonesia attacked fintech payday lenders for these interest rates and the aggressive way in which they offer some services. The claim is that fintech lenders that offer payday loans exploit the absence of adequate interest rate regulations and insufficient price transparency rules.

Most protests targeted fintech lenders that are not registered with OJK, although a handful of registered fintech payday lenders were also targeted. In December 2018, the Indonesian Legal Aid Foundation, a reputable legal assistance organization, compiled a list of violations (CNN Indonesia, 2018) committed by fintech payday lenders. These included:

- Charging an ultra-high interest rate of 1–2% per day
- Insufficient pricing transparency (hidden fees and penalties)
- Changing business names without properly notifying consumers
- Lack of proper registered address and contact number
- Poor administrative and record keeping systems (which meant that compliant customers were accused of default)
- Accessing sensitive personal data in customers' mobile phones (including contact list)
- Using the borrower's contact list to make calls and otherwise reach out to contacts without the borrower's consent
- Threats and persecution during the collection process

The aggressiveness of personal data collection and use by fintech payday lending firms can be attributed primarily to the lack of a reliable system to provide credit scores or equivalent information about Indonesians. Indonesia has weak credit reporting infrastructure and only around 10% of adult Indonesians have credit data recorded at OJK's central financial repository system, SLIK (previously known as BI Checking). These data were developed through contributions by approximately 1,600 licensed financial institutions in Indonesia that used consumer credit reports from sources such as credit card payment records, mortgage defaults, and consumer loans. Because there is no way to reliably check creditworthiness, many people go to a bank or other financial institution to get a loan but their application is rejected when they cannot prove their creditworthiness. In response, consumers may decide to seek out unlicensed or unregistered (fintech) lenders in spite of their higher interest rates. Fintech lenders employ alternative (non-SLIK) data for underwriting, ID verification, address verification, income prediction, spending habits, and (if a client is seeking a business loan) merchant analytics. Fintech firms operating in retail payment and consumer lending may claim to around 3,000 data points for their credit assessment. These include:

The aggressiveness of personal data collection and use by fintech payday lending firms can be attributed primarily to the lack of a reliable system to provide credit scores or equivalent information about Indonesians. Indonesia has weak credit reporting infrastructure and only around 10% of adult Indonesians have credit data recorded at OJK's central financial repository system, SLIK (previously known as BI Checking).

- Identity and location: fraud-proof identity, location, gender, education;
- Behavioral : browser history, footprints, cookies, interaction of apps;
- Financial : deposits, withdrawal;
- Technical : operating system, browser, hardware;
- Social Media : social graph, sentiment analysis;
- E-commerce : consumption pattern;
- Repayment records : punctuality.

In short, fintech payday lenders are operating in a space whereby the requirements are still evolving and public and semi-public institutions are still taking shape. The issuance of OJK Regulation No. 77 of 2016 in December 2016 was meant to facilitate innovation in the new sub-sector of financial services. In contrast to the banking regulations, for example, to date there is not yet any requirement on interest rate, pricing and information disclosure, as well on collection standards. There is also no specific prohibition to lend money without license as opposed to doing banking activities (deposit-taking) that are strictly prohibited if carried out without license and subject to criminal sanction. The institution of credit sharing information currently managed by OJK as the state regulator and possible access by licensed credit bureaus are also not yet established. All of these governance situations, in turn, enable fintech operators to grow their business at the expense of consumers. A recent review of consumer protection law and policy in Indonesia by the United Nations Conference on Trade and Development (UNCTAD) concluded that Indonesia's consumer protection system needs to address emerging issues with e-commerce and data protection. The review concluded that general provisions exist in the Law No.19/2016 on electronic information and transactions but "specific laws on data protection, data sovereignty and other issues have yet to be formulated and certain standards applied across all sectors" (UNCTAD, 2019). The blueprint of Indonesia's central bank (Bank Indonesia) for Indonesia's Payment Systems (IPS) 2025 includes the protection of consumer data as one of its five principles. Working groups were established in early 2019 that aim to create a regulatory framework that determines what financial information can be shared, what information was private, and what method would be used to share information (Harsono, 2019).

B. Concerns about Chinese involvement in Indonesian Fintech

One of the key issues raised by consumer groups is that personal data protection has been unable to keep up with fintech developments, leading to data abuse by some fintechs. These abuses included using the borrower's contact data to call close relatives for repayment without the consent of the borrower or the borrower's relative. Collection calls were problematic not only because of the misuse of data but because of the behavior of these debt collectors, which in the case of several companies was reported as aggressive.

Central to the heated public debate in Indonesia and major controversy surrounding fintech payday loans is the association of this particular business model with Chinese-controlled companies. During the second half of 2018, OJK noted that the arrival of predominantly Chinese fintech lenders, which often did not register at OJK and employed aggressive debt collection practices, started to alarm the regulator. Central to the heated public debate in Indonesia and major controversy surrounding fintech payday loans is the association of this particular business model with Chinese-controlled companies. During the second half of 2018, OJK noted that the arrival of predominantly Chinese fintech lenders, which often did not register at OJK and employed aggressive debt collection practices, started to alarm the regulator. It produced a blacklist of 222⁴ banned fintech lenders in July 2018 and continuously updated the list until April 2019, when the total number of banned apps reached 947.⁵ In early January 2019, the cybercrime unit of the Indonesian National Police Force (*Kepolisian Negara Republik Indonesia*, "Republic of Indonesia State Police" or POLRI) arrested three employees working for a Chinese-owned fintech payday lender for aggressive debt collection behavior amounting to online threats and harassments.

Whether protests of fintech payday lending were the result of a problem with lending regulations and practices or of underlying anti-Chinese sentiments in Indonesia, they shed a critical light on Chinese fintech investment. An appropriate response requires finding the root problems that need to be addressed. Are Chinese fintech payday loan providers importing unethical business practices that harm Indonesians, and if so does this provide evidence of the claim that Chinese capital undermines democratic governance in other countries? Is this investment a move coordinated by the Chinese government or were decisions made by largely autonomous Chinese businesses attracted by opportunities in the Indonesian market?

⁴ Previously 227, but five were later excluded because they were found to be licensed financial institutions.

⁵ Based on official data released by OJK. See further discussion on Section C5.

FINTECH LANDSCAPE IN INDONESIA

A. Fintech Regulatory Landscape

"Financial technology" or "fintech" simply refers to the use of technology to deliver financial services. It can encompass almost every technological development in financial services, including traditional wire transfer, automated teller machines (ATMs), electronic data capture (EDC) devices, and digital banking mobile application.

The emergence of direct offerings from technology companies has necessitated the creation of a new form of licensing and compliance to compensate for the fact that the conventional business model classification does not fit with the new structure. However, recent public discussion of the term "fintech" refers to new start-ups and established technology companies that have begun to deliver financial products and services directly to businesses and consumers. This new model is different because it no longer treats technology companies as the "technology vendors" of financial institutions. Fintech in Indonesia has been a combination of international, regional, and local technology players that can either be independent entrepreneurs like local unicorns⁶ such as Go-Jek, the ride-hailing company, or part of larger groups as in the case of a local subsidiary of Chinese firms such as Alipay.

The emergence of direct offerings from technology companies has necessitated the creation of a new form of licensing and compliance to compensate for the fact that the conventional business model classification does not fit with the new structure. Within the financial industry a division has emerged between "the incumbent", or traditional financial institutions (e.g., banks, insurance companies, investment banks, consumer financing companies), and "the challenger", or non-traditional financial institutions (e.g., e-money, e-wallet, peer-to-peer/marketplace lending). In this paper, the term "fintech" refers to new business models that were previously unregulated but recently introduced to accommodate new products, services, offerings, or business models.

This scope and definition, admittedly, will not capture all fintech features. For example, Akulaku Finance Indonesia, the number one fintech lender in Indonesia by transaction volume (loans disbursed), is not technically a fintech lending company because it is registered under the traditional consumer/multi-financing license, but the way it provides credit and uses alternative digital data for credit scoring mirrors exactly the operation of consumer fintech lenders registered as fintech at OJK. Digibank from the Development Bank of Singapore (DBS) is legally a bank because it is the product of a licensed banking institution, but uses digital innovation and operates like a fintech in everything from consumer credit assessment to personal financial management. Therefore, a case-by-case approach is important to understanding the fintech market. It is a combination of new business models, services, and products that are offered by emerging entities.

⁶ Private startup companies valued at \$1 billion or more. Unicorns are discussed further in part D of this paper.

Regulatory institutions in Indonesia have responded to the development of new business models and new services such as peer-to-peer (P2P) lending, e-wallets, or payment gateways. The main regulators are OJK as the financial services regulator, the central bank of Indonesia (Bank Indonesia, or BI) as payments regulator, and the Ministry of Communication and Information Technology (the ICT ministry, Kominfo). Table 1 outlines the basic regulatory and institutional framework for fintech in Indonesia.

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Authority	Specific Departments	Fintech Focus	Key Regulatory or Policy Issues
Financial Services Authority (OJK), as the main regulator for various financial services in Indonesia	Fintech Lending Departments	Registration and licensing for P2P lending companies	 Assess ownership structure and operational readiness of fintech lending companies Foreign ownership is capped at 85% Set out policy for data collection practice specific for fintech lending Does not govern interest rate (currently no cap in fintech lending), but has been encouraging players to reduce interest rate
	OJK Digital Financial Innovation Hub	Registration and licensing for P2P lending companies	Assess ownership structure, product innovation, and operational readiness of relevant fintech that does not fit into OJK licensing framework.
	Investment Alert Task Force	Enforcement of illegal fintech lenders	 Monitor the market for new market players operating without OJK license Regularly publish list of unlicensed / unregistered financial service providers Share the list with police departments for follow up in the event of potential criminal act
	Capital Market Department	Licensing for fintech companies in the capital market, including equity crowdfunding, securities / wealth management broker	Assess ownership structure, product innovation, and operational readiness of fintech companies in the capital market sector

Table 1.		
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Basic Regulatory and Institutional Framework for Fintech in Indonesia

	Insurance Department	Licensing for fintech companies operating as insurance brokers	Assess ownership structure, product innovation, and operational readiness of fintech companies in the insurance sector
Bank Indonesia	Department of Payment System Policy—Licensing Directorate	Licensing for fintech companies carrying out clearly defined payment business models (E-Money, E-Wallet, Payment Gateway, Remittance)	 Assess ownership structure, product innovation, and operational readiness of fintech companies within payment sector Foreign ownership capped at 49% for local E-Money companies Grant product approval for foreign E-Money players (e.g., Alipay or WechatPay) by requiring them to partner with local banks
	Department of Payment System Policy - Fintech Office	Licensing for fintech companies for carrying out business models outside of the clearly defined model	Assess ownership structure, product innovation, and operational readiness of payment companies not governed by specific payment business licenses.
The Ministry of Communications and Informatics (Kominfo)	Directorate General of Information Informatics (APTIKA)	Registration for general ICT platforms	 General registration of ICT platforms Set out general personal data protection framework

B. Fintech Business Models and the Regulatory Framework

As noted above, fintech can refer to various business models subject to different regulatory authorities. Table 2 and Figure 1 further detail each business model as defined by the respective regulatory framework.

Lending	106 companies	Registered at OJK Fintech Lending Departments
Payment	61 companies	Registered at both BI and OJK
Financial marketplace	19 companies	Registered at both BI and OJK
Equity crowdfunding	5 companies	At the time of writing, none licensed by OJK, based on association data of companies already applying or intending to apply to OJK
Insurtech	6 companies	A mix of regulated entities, such as licensed innovative insurance brokers, insurance marketplaces, and new insurtech business models registered at OJK Innovation Hub
Wealth management and financial planning	14 companies	A mix of regulated entities such as licensed innovative broker-dealers and unregulated firms registered at the OJK Innovation Hub
Miscellaneous	19 companies	Registered at OJK Innovation Hub
Enabler services	14 companies	None officially registered, figures based on Indonesia Fintech Association data

Table 2. Business Models, Prevalence, and Registration

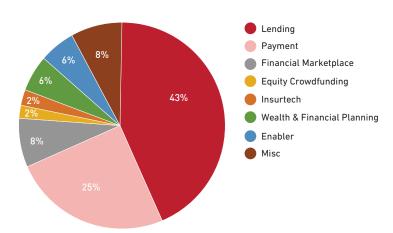


Figure 1. Fintech Providers in Indonesia

1. Fintech Regulatory Landscape

Fintech lending has been emerging as a popular business model since OJK introduced OJK Regulation No. 77 on Online Money Lending and Borrowing at the end of 2016, which came fully into force in the first quarter of 2017. As of April 2019, 106 companies were registered.

Before this regulation was enacted, companies operated with needing approval to lend money. During this time, unregulated businesses attracted approximately 14,000 lenders, 38,000 borrowers, and dealt with IDR 284 billion (\$20 million) in loan disbursements. With the regulations enacted at the end of 2017, the number of lenders reached around 100,000, borrowers 259,000, and loan disbursements reached IDR 2.56 trillion (\$179 million). It took about one year for players in this space (including major ones from China) to obtain the necessary registration and set up their operations, and as such the industry started to pick up in 2018. As of February 2019, the number of lenders have reached around 245,000, there were around 6 million borrowers, and IDR 28 trillion (\$2 billion) was being disbursed in loans (Otoritas Jasa Keuangan, 2019).

OJK Regulation No. 77/2016 defines "fintech lending" as a marketplace that connects lenders and borrowers on a peer-to-peer platform".⁷ Under this understanding of fintech, as it was originally envisioned by the regulators, the "marketplace" feature allows fintechs to match borrowers with lenders and lenders decide to whom they would like to make loans, what is often referred to as P2P lending. This regulatory framing does not allow fintechs to maintain the types of portfolios or funding pools used by more traditional financial institutions, such as deposit accounts to back loans, returns from investments, or fees for services such as insurance, to finance loans—they only act as "matchers" between borrowers and lenders.

In reality, as the middle class has developed and the need for more diverse loan providers has spurred innovation, the traditional version of fintech has not been able to meet consumer needs. OJK has been flexible about allowing fintech to develop new tools to meet these challenges.

⁷ Article 1 of OJK Regulation No. 77/2016 on Online Money Lending and Borrowing.

Because there are cases in which much smaller loans are needed immediately, fintechs have developed the "super-lender" model for meeting the needs of the market. Under the superlender model,⁸ a fintech lending platform sets up a subsidiary business to pool funds from investors or lenders, obtains authorization from those lenders to manage their funds, and then treats this subsidiary as a lender that can be matched with borrowers in order to make the types of loans that are impossible under traditional fintech borrower-lender matching. Because the fintech itself, rather than the lenders, helps to find borrowers and makes the lending decision, the distinction between a fintech lending platform and a bank or consumer financing company becomes blurred.

The development of the super-lender model to service borrowers left behind The development by traditional fintech models has resulted in the development of products of the super-lender beyond those originally envisioned by regulators. Although small business and microfinancing loans can be facilitated simply by matching lenders to borrowers, consumer loans and payday loans usually require nearly instantaneous assessment and approval, which requires that the fintech platform have the means and authority to approve and disburse the funds. As a result, the development of super-lenders has allowed the creation of in the development of two additional product categories and there are now four types of products offered by fintech lenders: (i) Small-medium enterprise (SME) marketplaces, (ii) microfinance marketplaces, (iii) consumer loans, and (iv) cash payday loans. The key features of each product are as follows:

model to service borrowers left behind by traditional fintech models has resulted products beyond those originally envisioned by regulators.

(i) SME lending marketplace

- Loans of up to IDR 2 billion (roughly \$140,000) for productive purposes
- A more traditional fintech market matches borrowers and lenders
- Varieties include invoice financing, online seller financing, and merchant cash advances
- Interest rates are competitive and comparable to those offered by traditional financial institutions

(ii) Microfinance marketplace

- Loans of up to IDR 25 million (roughly \$1,600) for productive purposes
- A more traditional fintech market matches borrowers and lenders
- These loans are typically the result of a combination of social entrepreneurship and community empowerment programs, including for targeted segments such as farmers, fishers, or rural micro entrepreneurs
- Interest rates are competitive and comparable to those offered by traditional financial institutions

(iii) Consumer loans

Personal / consumer loans of up to IDR 25 million (roughly \$1,600) for consumption purposes

⁷ Also called the "limited standby lender" model.

- Repayment is made in installments
- Requires instant approval, therefore funding comes from a super-lender
- Includes loans to finance purchases of goods, education loans, and property loans
- Interest rates are competitive and comparable to those offered by credit card companies

(iv) Payday Loans

- Micro consumer loan up to IDR 2 million (roughly \$140) for consumption purposes, disbursed in cash
- Repayment in full at the end of the month
- Requires instant approval, therefore funding comes from a super-lender
- High interest rate, up to 2% per day, although OJK is exploring legal options to reduce the rate gradually

Out of 106 companies registered with OJK in April 2019, payday and consumer loans products make up 31 and 28 companies, respectively. SME lending marketplaces account for 27 companies, whereas 19 companies are micro-finance marketplaces. Figure 2 outlines the representation of each model among the companies registered with OJK.

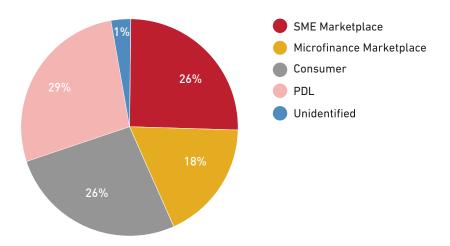


Figure 2. Business Models of Fintech Lending in Indonesia

2. E-Payments

Because credit cards are so rare, fintechs have filled the gap. E-payments are a substitute for card payments that are available to far more merchants and consumers because they are cheaper and more flexible. E-payments is another sub-sector of digital finance that is ripe for disruption.

E-payments encompasses e-money (an interest free, deposit-taking⁹ payment instrument), e-wallet (digital interface platform of payment instruments), payment gateway (a service that allows merchants to accept different payment methods), and to a certain extent, remittances. E-payments is an area to which both banks and non-banks (fintechs and telecommunications companies) can cater. For example, there are 38 e-money license holders, consisting of 18 fintechs, 16 banks, and 4 telecommunications operators.

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As of April 2019, there are 61 fintech payment companies (non-bank, non-telecommunications) registered at Bank Indonesia, consisting of 18 e-money operators (two of which hold a double license that allows them to also operate e-wallets), 11 payment gateways, and 42 payment system companies applying other payment business models but have been registered at BI Fintech Office.

Indonesia's rapid adoption of e-money is led by fintechs. After doubling transaction value in 2017, e-money quadrupled transaction value to IDR 47.2 trillion (\$3.4 billion) in 2018. This is similar to the surge in e-money adoption seen in China in 2016. Based on analysis by Morgan Stanley (2019), Indonesia's e-money transaction share of non-cash transactions (i.e., credit cards, debit cards, and e-money) jumped from 1.3% in 2016 to 2.1% in 2017 and 7.3% in 2018, putting Indonesia at a similar level to India, where mobile payments grew from a 6.4% share in 2014 to a 10.9% share in 2015. In December 2018, e-money transactions reached an all-time high of 9.2% market share in non-cash transactions, almost triple its level in December 2017 (3.5%).

Non-banks dominate the digital payment sector. BI data in April 2019 shows that there are 113 million user accounts for non-banks (65%) compared to 60 million user accounts for banks (35%). However, 99% of non-bank users are digital products (digital wallet or digital money), whereas bank-based e-money is card-based, mostly used for public transportation (e.g., bus, toll roads, subway) and so is technically not "digital" (CNN Indonesia, 2019). Therefore, it is safe to conclude that 99% of mobile phone-based digital payment is facilitated by fintechs rather than banks.

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⁹ In other words, a prepaid payment instrument.

These fintechs include Go-Pay (of the ride-sharing company Go-Jek), OVO (developed by Lippo Group, now closely partnering with the ride-sharing company Grab), DANA (a joint venture between Ant Financial/Alipay with a local business group), and T-Cash (previously Telkomsel, a telecommunications operator, now spun off as a separate fintech).

In terms of adoption, Go-Jek is leading with a gross transaction value of \$9 billion, while Go-Pay reached \$6.3 billion in 2018 (CNBC Indonesia, 2019). OVO, Go-pay's main competitor, did not disclose its transaction values but did disclose that it processed around 1 billion transactions in 2018 (Katadata.co.id, 2018). Fintech is conquering digital payment for the following reasons:

- Rapid growth among offline merchants since mid-2018, especially since Go-Pay, DANA, and OVO opened their platforms for offline purchase;
- Online food ordering and online transportation from ride hailing apps (Go-Jek and Grab);
- Discounts and promotions, with fintechs offering up to 60% discounts for retail transactions;
- New distribution networks created by fintechs for balance top-up, that is, cash deposits through motorcycle drivers (Grab and Go-Jek) or traditional kiosks (warung) managed by e-commerce platforms (Bukalapak and Tokopedia, both Indonesian unicorn startups) that allow customers without internet access to place orders and receive products at kiosks and offer digital goods such as internet data, electricity tokens, and online game vouchers.

Finally, it is important to note that market penetration by these local payment instruments is distinct from potential penetration of foreign payment products. For example, DANA is an Alipay joint venture, but Alipay can also operate directly to allow its Chinese customers to use their Alipay app in Indonesia. In spite of their joint ownership, DANA and Alipay are subject to different requirements. For Alipay (the Chinese brand) to cater to the Chinese visitors in Indonesia, BI requires Alipay (or WeChat pay, or any company) to partner with Indonesian banks with core capital of at least Rp30tn.

3. Other Registered Businesses

The remaining types of businesses among those registered by OJK are briefly described in Table 3.

Financial marketplace (19 companies)	A platform through which customers can compare and purchase financial products, from credit cards to personal loans, excluding insurance and securities
Equity crowdfunding (5 companies)	A platform to connect companies raising funds to retail investors in exchange of equity ownership
Insurtech (6 companies)	Companies dedicated to innovations that support the insurance sector, including digital insurance marketplaces or exchanges, claim handling, crowd-insurance, and telematics
Wealth management and financial planning (14 companies)	Companies dedicated to innovations that support the insurance sector, including digital insurance marketplaces or exchanges, claim handling, crowd-insurance, and telematics
Miscellaneous (19 companies)	Includes funding agents, payment agent networks, and sector-specific solutions (agriculture, shipping, warehousing)
Enabler (14 companies)	Includes AI and big data for credit scoring, e-KYC providers, and companies that support back-end services for core banking and cloud computing

Table 3.Other Business Types Registered with OJK

C. How Regulations are Catching Up with Fintech Innovations

Several studies argue that "many forms of capital emanating from authoritarian nations are having a corrosive effect on democratic institutions and private enterprise in recipient countries" (CIPE, 2018) by taking advantage of the weak regulatory systems in those recipient countries.

In the financial sector, the exploitation of weak regulatory systems has been attributed not only to the origins of foreign capital in countries with poor institutions, but also to the new and arguably disruptive fintech business models. Around the world there are two leading ideas that attempt to explain the shift to alternative fintech: an increased regulatory burden on traditional financial institutions and the emergence of new technology (Buchak, Matvos, Piskorski, & Seru, 2017). Both of these factors directly affect the governance of the financial industry, especially when the structure of regulatory supervision is not well integrated and when the law governing emerging, data-driven technology is not properly defined.

In the financial sector, the exploitation of weak regulatory systems has been attributed not only to the origins of foreign capital in countries with poor institutions, but also to the new and arguably disruptive fintech business models.

Beginning in 2017 and picking up in 2018, the market for financial consumer products in Indonesia has undergone a dramatic change. Intermediation has shifted away from traditional banks to alternative online lending platforms. The explanatory narrative is that conventional financial institutions are subject to an ever-increasing regulatory burden, heightened legal scrutiny, and larger capital requirements, all of which have affected the products they can provide and increased the cost of providing them. As a result, traditional institutions, especially those facing tighter capital constraints, are withdrawing from markets with high regulatory costs and alternative fintech lenders step in to fill this gap.

The exponential growth of fintech lending has outpaced the speed of regulatory adaptation. The exponential growth of fintech lending has outpaced the speed of regulatory adaptation. Alternative fintech operators have interpreted and complied with the existing regulations in ways that deviate from the conventional business practices the regulators anticipated. Their "creative compliance" ensures minimum efficient regulatory fulfillment. To the incumbents, these practices look like exploitation of legal loopholes that advantage new businesses over traditional firms.

Navigating licensing requirements is an integral part of developing new, disruptive business models. It is not specific to the financial sector in Indonesia, but has occurred around the world across various sectors. For example, ride-hailing companies such as Uber have faced challenges in different jurisdictions regarding whether their businesses constitute a taxi service that requires transportation license, or merely a matching platform that connects drivers with riders. There are also major questions about the status of their drivers and whether they are qualified as employees who must be provided with statutory labor benefits or not. In the hospitality industry, room-sharing platforms such as Airbnb have been facing similar challenges regarding whether their business operations should require them to obtain hotel licenses. Both of these cases closely mirror Indonesia's fintechs and their borrower-lender matching models.

Several examples of creative compliance are prominent in fintech lending. Before the introduction of OJK Regulation 77/2016, companies offering consumer financing were required to obtain a consumer financing institution (*perusahaan pembiayaan*) license in order to perform online (direct on-balance sheet) lending. The minimum paid-up capital for this license is IDR 100 billion. The introduction of OJK 77/2016 enables companies to obtain a fintech lending registration with minimum paid-up capital of IDR 2.5 billion. The downside of fintech lending registration as opposed to consumer financing institution registration is that fintech lending can only be used to perform matching platform functions, not direct lending. In practice, many fintech lenders (including all fintech payday lenders) easily circumvent this restriction by using the "super-lender" model. By doing so, they can, de facto, perform direct, on-balance sheet lending with a much lower minimum capital of IDR 2.5 billion.

The introduction of OJK 77/2016 enables companies to obtain a fintech lending registration with minimum paid-up capital of IDR 2.5 billion. The downside of fintech lending registration as opposed to consumer financing institution registration is that fintech lending can only be used to perform matching platform functions, not direct lending. In practice, many fintech lenders (including all fintech payday lenders) easily circumvent this restriction by using the "super-lender" model. Another example is the case of "virtual credit cards". Before the introduction of OJK Regulation 77/2016, companies offering credit cards needed to be licensed banks or consumer financing institutions (*perusahaan pembiayaan*), then obtain a card-issuance license from Bank Indonesia, known as an APMK (*Alat Pembayaran Menggunakan Kartu*) license. As transactions move online, and even as transactions in the physical world stop requiring a physical card (substituting technology such as QR payments), APMK licenses are becoming less relevant and may become obsolete. This, again, creates a regulatory advantage for fintech companies over credit card issuers.

Finally, a controversial practice employed by the Chinese-dominated payday lending sector is unlimited interest rates on small, high-risk loans. Banks are subject to various requirements affecting their interest rate, from the benchmark BI rate to primary reserve requirements. This makes many small consumer loans too risky for incumbents to take on. In fintech, on the contrary, the interest rate requirements are relatively flexible because the only factor taken into consideration is the "agreement" between the lender and the borrower, for which the fintech operator merely serves as a platform for facilitation. Interest rates can be as high as 2% per day, a rate at which many lenders will happily extend credit, as evidenced by the rapid entry of lenders into this market.

At the time of writing, OJK was considering how and whether to impose an interest rate cap on fintech lending of 0.8% per day. Although an interest rate cap is not desirable if it means that some people in desperate need of cash cannot get it in time because lenders consider them too risky to loan to without high payoffs, the alternative (full interest-rate liberalization) may also hurt consumers so desperate for cash that they are not cautious enough to shop around. Further, with the lack of pricing transparency (especially on penalties for late repayment), loan values might double or triple once defaulted, further exacerbating the already high interest rates, another practice that could especially affect the most desperate and vulnerable borrowers.

Most of the concerns about the lag in regulation are at their root concerns about consumer protection. The challenge is to ensure that ride-hailing drivers have undergone proper background checks, shared rooms for rent will not disturb the surrounding neighbors, and that the financial products offered by a fintech lender to consumers are fair and transparent. In order to meet these challenges, it is important to understand that the problem is one of new, disruptive industries rather than being country-specific nor industry-specific.

CHINA'S FINTECH INVESTMENT IN INDONESIA

A. The Notion of "Control" and Identification of The Flow of Capital

The issue of corporate control is important to understanding the policy environment in which fintechs operate in Indonesia. There are several ways to determine who legally controls the company. A quantitative measure relies on the control of shares in the company. The standard rule is simple majority rule, or 50% +1. However, in some cases, including the case of companies listed publicly in Indonesia before 2008,¹¹ the threshold can be set lower so that any person or entity controlling as little as 20% or 30% can be considered in control of the company.

Control can also be measured *qualitatively*, by the ability to control the management and/or the policy of a company. An organization can have a small stake in a company¹² but retain control through its authority to appoint the board of directors, for example.

Both quantitative and qualitative approaches to evaluating company control are recognized in securities regulations that apply to publicly traded companies and may be adopted to assess the fintech sector. For tech businesses and digital companies, the qualitative approach can be more suitable for determining company control even though it is harder to measure. There are many instances in which even a small minority stake (below 5%) can retain control of the company, especially in venture capital-backed companies that have undergone multiple funding rounds. In these cases, the founder typically retains a management control right—for appointing the board of directors and board of commissioners—even when their share of the company's total capital has been substantially reduced by the inclusion of new funders. It is also possible for a venture capitalist to own majority stakes of a tech company without gaining control. Venture capitalists are generally more interested in financial returns from startups than they are in controlling the companies in which they invest. They typically have authority in financial decision making, including decisions to secure new funding from investments or through a loan, but not necessarily management control.

Further, by this definition of control, a nominee structure¹³ that represents a foreign interest—a common model in Indonesian fintech—can be considered way in which control can be exercised. This can be shown in the composition of many boards of directors and boards of commissioners, which are often mostly local to make it easier to qualify for work permits or qualification assessments.¹⁴ Strict and thorough assessments by the regulators (OJK or BI) of the identity of license applicants prior to the issuance of a business license has made it more difficult to use a nominee structure in financial services compared to other sectors. If the parties decide to proceed with a nominee arrangement, pursuant to the Indonesian Investment Law of 2007, the agreement will be deemed void and the foreign shareholders will have no legal protection in the company. They will proceed covering their own risks and liabilities.

¹¹ Bapepam-LK Regulation IX.H.1 governs the takeover of control for publicly listed companies. In IX.H.1 (2008), Bapepam-LK set the quantitative concept of control at 50%+1, replacing IX.H.1. (2002), which set it at 25%. In 2012, Bapepam-LK changed its name into OJK after merging with a certain supervisory part of Bank Indonesia.

¹² Since 2008, Bapepam IX.H.1 has been amended several times, most recently through OJK Regulation No. 9/P.OJK 04/2018 on Takeover of Public Companies.

¹³ An equity structure in which in which a nominee holds the legal title to shares that benefit another person.

¹⁴ To some degree, this acts as a fit-and-proper person test, a tool sometimes used to try to prevent corruption on a board.

Indonesian financial regulation does not allow 100% foreign ownership in fintech. The limit on foreign ownership varies with the business model, from 85% (for P2P lending) to 49% (for e-money enterprises). Given this restriction, within this paper we divide the term control into "exclusive control," in which the controller has exclusive control regardless of whether they work with a local partner, and "joint venture" or "shared control," in which the structure of the partnership more resembles an equal arrangement between the foreign and the local partner. Shared control occurs in large part because the local partner is a considerably larger or more reputable business group with strong bargaining power. Exclusive foreign quantitative control of e-money licenses is impossible because of the 49% foreign control through the 85% maximum foreign ownership.

Indonesian financial regulation does not allow 100% foreign ownership in fintech. The limit on foreign ownership varies with the business model, from 85% (for P2P lending) to 49% (for e-money enterprises).

Once control is defined, the next step is to identify the country from which that control is exercised. For years, the Indonesian Investment Coordinating Board (BKPM) has listed Singapore as the top country of origin for foreign investment in Indonesia. Singapore is known as Asia's business hub because capital in-flows from various regions including the United States, Europe, China, India, and Southeast Asian regions are aggregated through the country. It is therefore likely that some Chinese investment facilitated through Singapore would be officially recorded as investments from Singapore rather than as Chinese investment (van der Eng, Chinese Investors in Indonesia seem to be Tighthening their Belts, 2018). A study by van der Eng (2018) revealed that in 2015 Singapore held 51% of the \$62.8 billion outward stock of Chinese FDI to ASEAN countries. This is almost as much as the \$64.7 billion outward stock of Singapore's FDI in other ASEAN countries in 2015. Indonesia hosted 51% of Singapore's outward stock of FDI that year, it may also be the main recipient of Chinese FDI channeled through Chinese subsidiaries located in Singapore (Kong & van der Eng, 2017).

The combination of qualitative ownership control, the potential for nominee structure, and investments through Singapore, make it impossible to accurately assess the level of foreign ownership and control of fintechs operating in Indonesia without access to each company's confidential legal documents. This paper therefore approaches the problem of assessing foreign ownership through a deal or transaction basis, relying on disclosed deals and/or in-depth interviews with key business insiders conducted by CIPS.

B. Identifying Deal Size of Unicorns, Independent Fintech Startups, and Chinese Subsidiaries

The issue of corporate control is important to understanding the policy environment in which fintechs operate in Indonesia. There are several ways to determine who legally controls the company. A quantitative measure relies on the control of shares in the company. The standard rule is simple majority rule, or 50% +1. However, in some cases, including the case of companies listed publicly in Indonesia before 2008,¹¹ the threshold can be set lower so that any person or entity controlling as little as 20% or 30% can be considered in control of the company.

A first attempt to understand Chinese investment in fintech is to divide these companies into startups and subsidiary companies (in this case, subsidiaries of a Chinese parent company).

The unicorns are key players in fintech because they attracted the majority of funding and allocated those funds to build their fintech products, or acquire fintech companies Startups are typically portrayed as led by local founders/entrepreneurs trying to implement new business models in Indonesia, whereas Chinese subsidiary companies import already successful business practices from China to Indonesia. In terms of control, the founding team in startups usually retains management control¹⁵ even when the majority of shares are held by financial investors, while the controlling shares of a Chinese subsidiary remain with the Chinese parent company.

Startups can be further divided into *independent fintechs*, which usually have a single business focus (online lending, e-payment, insurtech, etc.) and unicorn startups, which leverage their main, often non-fintech businesses (e-commerce, ride-hailing, or online travel) to drive their fintech arms. The unicorns are key players in fintech because they attracted the majority of funding and allocated those funds to build their fintech products, or acquire fintech companies.

1. Unicorns

Since 2016, the Indonesian tech ecosystem has been dominated by the rise of the unicorns: private companies valued at \$1 billion. Unicorns are flourishing in Indonesia, whether homegrown, such as Go-Jek, Traveloka, Tokopedia, Bukalapak, or regional companies based out of Singapore, such as Grab, SEA Group, and Lazada, or China, like JD.com. A recent study by Google shows that between 2015 and 2018, total funding raised for unicorn startups in Southeast Asia was raised in Singapore (approximately \$16 billion) and Indonesia (roughly \$6 billion), with the remaining \$2 billion raised in the rest of Southeast Asia. It is not safe to assume that only \$6 billion of this funding went to the Indonesian market. The same study concludes that almost 80% of funds raised went to the unicorns of Southeast Asia (and Indonesia), and that these unicorns afterwards invested heavily in Indonesia. Grab, Lazada, and Sea Group (in addition to local Indonesian unicorns) have deployed funds to build businesses across the region, including, and especially, in Indonesia.

Unicorns have invested substantial funds into fintech product development. In many cases, these products are well-integrated into the company's main app, although legally they can be part of different but affiliated companies.

Table 4 shows how Chinese funds have played a major role in the establishment and rise of seven Southeast Asian unicorns, all of which have substantial fintech operations in Indonesia. Underlined companies originated from China.

¹⁵ There are some exceptions to this rule, including the acquisition of Lazada by Alibaba.

Table 4.

Chinese Funds and the Rise of Southeast Asian Unicorns

Unicorns	Fintech Related Business in Indonesia	Recorded Deals (the author does not have access to what percentage of these amounts went to the respective company's fintech arms)
Go-Jek	 Go-Pay (e-payment) Kartuku (e-payment) Mapan (payment agent network) Midtrans (e-payment) Findaya (lending) 	 2016: valued at \$1.3 billion and secure over \$550 million from investors including KKR, Warburg Pincus, Farallon Capital, and Capital Group Private Markets. 2017: valued at \$2.5 billion and secures over \$1.2 billion in funding. China Giant, Tencent reportedly led this round. Early 2018: secured another \$1.5 billion fund injection at a \$5 billion valuation, from Google, Singapore's Temasek Holdings, and BlackRock. October 2018: raised \$1.2 billion and sought a valuation of \$9 billion. Investors are said to include Google, Tencent, and JD.com.
Bukalapak	 In-app financial marketplace In-app bill-payment Payment agent network 	 Major shareholder is EMTEK, through PT. Kreatif Media Karya, holding 36.86% of shares. Alibaba's Ant Financial was reported to lead Bukalapak funding rounds in 2017. Another major shareholder is GIC, the Singapore government's investment arm. January 2019: Bukalapak announced the arrival of another key shareholder, Asset-Naver Asia Growth Fund from Korea.
Tokopedia	 In-app financial marketplace In-app bill-payment Payment agent network 	 2014: The company raised \$100 million from SoftBank and Sequoia in 2014. Beenos, East Ventures, and CyberAgent Ventures are among its early backers. Tokopedia has raised a total of \$2.4 billion in funding over nine rounds. In December 2018, Tokopedia had secured \$1.1 billion in its latest financing round, led by the SoftBank Vision Fund and Alibaba Group with participation by Softbank Ventures Korea and other existing investors. August 2017: Alibaba has led a \$1.1 billion investment in Indonesia's Tokopedia.
Traveloka	Recently acquired DIMO (e-payment)	 Traveloka has raised a total of \$920 million in funding over five rounds October 2018: raised roughly \$420 million reportedly led by GIC, Singapore Government's investment arm. July 2017: raised \$400 million in a funding round led by Expedia, valued a \$2 billion valuation. Previously the company raised roughly \$100 million from by East Ventures, JD.com, Sequoia Capital, and Hillhouse Capital Group.
Grab	 OVO (Grab as the largest shareholder) Taralite (lending) 	 Considered Southeast Asia's first Decacorn, Grab's latest funding round in March 2019 was reported to be \$1.5 billion, led by Softbanks' Vision Fund. In total, Grab has raised \$9.1 billion Grab's latest valuation is reported to be \$14 billion. Grab has attracted funding from many sources and sectors, including the United States (500 Startups), Japan (Softbank), Australia (Macquarie Capital) and China (Ping An Capital, China Investment Corporation, China Cinda Asset Management, Didi Chuxing). Key banks (HSBC, Kasikorn) and automotive manufacturers (Yamaha Motor, Hyundai Motor, and Toyota Motor) have also invested in Grab.

SEA Group	 ShopeePay (e-payment) ShopeeKredit (lending) 	 Sea is a NASDAQ listed company (listed in October 2017) that has raised a total of \$2.6B in funding over eight rounds. In March 2019, the Company is raising additional \$1.5 billion from a new share offering in American Depository Shares (ADS) to be funneled into its Shopee e-commerce business. Prior to the 2017 IPO, Tencent was the largest shareholder in Sea group, followed by founder Forrest Li.
Lazada	• HelloPay (e-payment)	 2016: Lazada was acquired by Alibaba 2018: Alibaba's stake increased to an undisclosed size following the latest investment, a spokeswoman told Reuters. It held an 83 percent stake prior to the investment, which now doubles to \$4 billion from a \$2 billion infusion over the past two years.

Of these seven unicorns, Lazada is the only company in which the corporate control has changed from the original founders to a new, Chinese controller upon its acquisition by Alibaba. Other unicorns remain under the management control of their founding teams, but this does not diminish the importance of Chinese investments in fueling their growth. As indicated in the published transaction deals above, Chinese investors have been active in acquiring financial stakes in Indonesia's and Southeast Asia's technology giants.

Chinese investors have been active in acquiring financial stakes in Indonesia's and Southeast Asia's technology giants.

2. Independent Fintech

Outside of the unicorn-linked mega deals that fueled the fintech arms of these companies, independent fintechs, which are not affiliated with international or local groups, have also been attractive targets for investment in Indonesia. Media announcements have revealed that fintech startups raised around \$280.3 million, of which \$170 million went to Akulaku, which was founded by an independent Chinese entrepreneur who relocated to Indonesia and secured funding from a group of investors led by Alibaba's Ant Financial. Other significant deals included those by Kredivo, a consumer installment platform worth roughly \$30 million, Modalku, an SME lending marketplace worth roughly \$25 million and led by Softbank and Sequoia, and Cekaja, a marketplace for bank and insurance products worth roughly \$25 million and led by Experian. None of the funding for these three companies was led by Chinese companies or investors, although some Chinese venture capitalists did participate in the deals.

3. Chinese Subsidiaries

While Chinese investors into Indonesian unicorns or independent fintech startups are typically not able to control these companies, which are generally controlled by their founding team, Chinese investors definitely control the operations and management of the subsidiaries of Chinese firms in Indonesia. Significant Chinese influence in the Indonesian market originates in internal deals formed by strategic partnerships or the opening up of local subsidiaries by Chinese companies. Key China-related transactions are:¹⁶

- Xiaomi's financial arm, Mi Credit, aggregating financial products for the purchase of Xiaomi phones;
- JD Finance Indonesia, a fintech arm of JD.ID, a Chinese e-commerce company;
- The launch of OneConnect Indonesia, the subsidiary of Ping An Group, China's insurance firm and largest consumer finance provider;
- Several key investments by Chinese operators to enter the e-payment market, as described below; and
- Several Chinese operators setting up subsidiaries in online lending, as described below.

C. Identifying the Control Structure of Fintech Payment Companies

A substantial portion of the funding that went to the unicorns was used to develop fintech products in Indonesia, although the exact numbers are known only to the companies themselves. The same applies to major Chinese investments that open e-payment businesses in Indonesia. All of these companies have similar strategies when it comes to fintech: start with payment products and later build various offering on top of the payment platform.

Digital money and digital wallets are payment products that interact directly with users such as retail customers. Table 5 lists the five of 18 Indonesian companies (28%) that are joint ventures with foreign entities.

The same applies to major Chinese investments that open e-payment businesses in Indonesia. All of these companies have similar strategies when it comes to fintech: start with payment products and later build various offering on top of the payment platform.

Joint Venture with Foreign Entities				
Visionet	Brand: OVO, a local financial partner of Grab of Singapore upon substantial investments by Grab to the Lippo-owned company, according to which now Grab owns at least 41% of OVO pursuant to PT. Visionet public corporate registry.			
Witami	A local affiliate of Thailand-based True Money, in which Ant Financial owns around 20% in the Thai holding.			
DANA	A joint venture between EMTEK local conglomerate group with Ant Financial that has leveraged Bukalapak's online outreach considering the close relationship between EMTEK, Ant Financial, and Bukalapak.			

Table 5. Joint Venture with Foreign Entities

 $^{^{\}rm 16}\,\rm No$ transaction values have been disclosed for any of these deals.



Interestingly enough, three of these five companies are directly linked to China and the remaining two are linked to Grab and SEA Group, which although not Chinese-controlled have substantial investors from China. Didi Chuxing reportedly invested as much as \$2 billion into Grab in 2017 (Russell, Grab gets \$2B from Didi and SoftBank to fuel bid to defeat Uber in Southeast Asia, 2017), while Tencent owned about 34% of SEA Group through 2017 (Chandler & Barrett, 2018). Another company worth mentioning is Go-Pay, which although locally-controlled, has received substantial funding from Chinese giants such as Tencent and JD.com, most notably in 2018 when roughly \$1 billion in investment was led by Google, Tencent, and JD.com, but also included Meituan Dianping (Potkin, 2019), and in 2017 when roughly \$1.2 billion of investment was led Tencent, in which Tencent reportedly contributed around \$150 million and JD.com \$100 million (Russell, 2017).

Before 2017, Alipay and Tencent attempted to apply for e-money licensing without local partners but had difficulty obtaining regulatory approval. It is not clear whether they would still pursue this license given that they eventually managed to secure the license through partnerships with, or investment in, local businesses.

D. Identifying the Control Structure of Fintech Lending Companies

Fintech lending can be divided into four general products: the SME lending marketplace, microfinance marketplace, consumer loans, and cash payday loans. This division allows us to see how the country of origin affects which business model a fintech will pursue. For example, all fintech lenders in the microfinance marketplace are domestic, while Chinese-controlled companies dominate the payday loan market.

It is also worth noting that the majority of fintech lenders in Indonesia are properly registered with the designated authority, OJK. Further, all unregistered fintech lenders were operating payday loan businesses.

(a). Registered Fintech Lenders¹⁷

- Below is our finding based on the controller's country of origin:
- The SME lending marketplace is dominated by domestic companies (96%), except for one company from Singapore.

¹⁷OJK 77/2016 Regulation recognizes two licensing steps: registration and full license. A company will receive registration status and will be given 1-2 years to complete the audit and documentary requirements before being fully licensed. Once registered, a company can fully operate as if it is licensed. Therefore, being registered is more of the same of being licensed in terms of permitted activities.

- All microfinance operators are all locally controlled.
- As illustrated in Figure 3, the ownership and control of consumer loan companies are more diverse, but still dominated by domestically controlled businesses (57%), whereas four companies are from China and one is a Chinese joint venture. Of the four Chinese-controlled companies, three originally planned to offer payday loans, but OJK has temporarily suspended the granting of new payday lender registrations due to controversies.

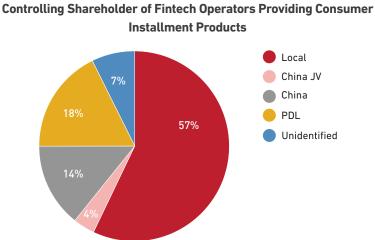
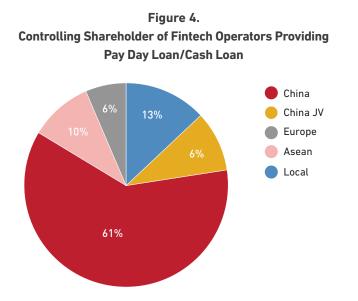


Figure 3.

In payday lending, two-thirds of controlling stakes are either Chinese (61%) or Chinese joint ventures (6%), as illustrated in Figure 4.



The predominance of Chinese control in payday loans compared to other fintech products is important because payday loans are the main source of controversy revolving around "fintech" in Indonesia. Complaints about fintech tend to be the use of ultrahigh interest rates, the potential for abuse (non-consensual use) of personal data, and threats and persecution during call collection.

Among the four main product offerings by fintech companies, Chinese-controlled companies are only dominant in the payday loan sector. Among offerings for SME loan marketplaces, microfinance marketplaces, and consumer loans, the controllers' countries of origin are either balanced or dominated by the domestic businesses.

The predominance of Chinese control in payday loans compared to other fintech products is important because payday loans are the main source of controversy revolving around "fintech" in Indonesia. Complaints about fintech tend to be the use of ultra-high interest rates, the potential for abuse (non-consensual use) of personal data, and threats and persecution during call collection. Rather than assuming these concerns are a product of fintech, it's useful to ask whether these problems are the result of the business model used for payday lending or in the controllers' approach to the Indonesian market, which may not be in line with Indonesian business practices.

The top leading platforms by transaction volume and the number of borrowers are all payday lenders from China. Below are the top five companies by transaction volume through the end of 2018, as ranked according to analysis by the authors through interviews, listed in alphabetical order.¹⁸

- Akulaku, founded by an independent Chinese entrepreneur, William Li, with substantial investments from Alipay's Ant Financial, offering consumer installment products;
- Dana Rupiah (a subsidiary of China-based Weshare Group), offering payday loan products;
- Kredit Pintar (a subsidiary of China-based Advance.AI), offering payday loan products;
- 4. Pendanaan, founded by an independent Chinese entrepreneur, Jasmine Hao Dai, offering payday loan products; and
- 5. Rupiah Plus (recently changed to Perdana), founded by an independent Chinese entrepreneur who offers payday loan products.

Akulaku Finance is the number one company by transaction volume, but as discussed earlier it is not a fintech company, though it operates in the same way that fintech lenders do. Akulaku Finance is a Chinese-controlled company.

(b). Unregistered / Illegal Fintech Lenders

Starting in June 2018, the spread of improper debt collection practices carried out by fintech lenders made national headlines. Only later was it discovered that these practices were largely undertaken by fintech operators not registered with OJK (although some registered fintech payday lenders have also been caught using such practices). Since that time, OJK has regularly

¹⁸Unfortunately, OJK does not publish transaction volume by company for comparison.

published a list of unregistered fintech lenders. OJK can only govern and supervise business activities under its licensing regime because it relies on administrative sanctions on the 106 companies it has recognized as registered entities for enforcement. OJK lacks the tools and the authority to act against unregistered entities. Almost all unregistered apps conducted payday loans, which by their nature (immediate, cash loans under \$140 offered at a high interest rate) target the poorer population, who receive minimum wages and lack access to more traditional consumer loans that offer better interest rates, such as credit cards or personal loans from banks.

To try to deal with the creation of so many unregistered fintech lenders, OJK sent the list to the Ministry of Communications and Information Technology (Kominfo), which responded by sending instructions to licensed Internet Service Providers (ISPs) to block the IP addresses of these unregistered apps. Kominfo also requested that Google remove these apps from the Google Play OJK can only govern and supervise business activities under its licensing regime because it relies on administrative sanctions on the 106 companies it has recognized as registered entities for enforcement. OJK lacks the tools and the authority to act against unregistered entities.

Store.¹⁹ From July 2018 to April 2019, OJK has blocked 947 mobile apps.Nearly all of these apps ²⁰ were operating as fintech payday lenders. Table 6 displays the series of blocked apps during July 2018 to April 2019.

No	Release Date from OJK	# of Fintech Banned
1	27 July 2018	222 (previously 227) ²¹
2	7 September 2018	182
3	13 February 2019	231
4	14 March 2019	168
5	28 April 2019	144
	Total	947

Table 6.	
Number of Blocked Apps, July 2018–April 2019	

OJK also sent the list of illegal fintech lenders to the Indonesian National Police (POLRI), but unlike accepting deposits (considered illegal banking), lending money is not a crime. Because fintech lending merely matches borrowers with lenders (even when they are super-lenders), POLRI and the Attorney General's Office have no authority over unlicensed money lending activities.

As of the July 2018 release, OJK had discovered that more than 100 unlicensed P2P lending providers in Indonesia were developed by Chinese firms, at least half of the 227 lenders they had identified (Aisyah, 2018). In December 2018, OJK issued a statement that out of roughly 400 apps

¹⁹ The segment of the population targeted by unregistered payday loan apps is much more likely to own an Android-based phone, as iPhones are normally not affordable to poor Indonesians.

²⁰ Five apps were blocked in error.

²¹ Previously 227, but later 5 excluded because they were found to be licensed financial institutions.

that had been closed down in July and September, the majority were from China (CNN Indonesia, 2018).

The high number of apps being shut down could mask a much smaller number of actual companies operating these apps—a single firm may develop multiple lending platforms. This appears to be the case for at least some firms. For example, a developer named Xinhe had uploaded at least nine P2P lending apps to the web and Google Play Store, and other developers with Chinese names such as LiChen, Tupulian, Xiehualei also established lending apps with Indonesian names such as Dompet Pinjaman (loan wallet), DompetKamu (your wallet) and Duit Instan (instant cash).

At the next round of app closures in February 2019, the illegal foreign fintech services operating in Indonesia were mostly from China, Russia, and South Korea, according to the OJK Investment Alert Task Force. But they are not overwhelmingly Chinese—the chief of the task force, Tongam L. Tobing, reported that 23 of 231 fintechs that were forced to stop their activities during January-February were Chinese firms (Dwinanda, 2019).

In March 2019, the OJK Investment Alert Task Force reported that out of 803 fintech lenders blocked (by that time), further analysis of their IP locations showed that the country of origin of 323 (40%) were not identified, while 178 companies (22%) were from Indonesia and the rest (38%) were from various jurisdictions, including China, Singapore, Russia, Hong Kong, and Malaysia. Of course, analysis of the server location based on IP addresses is not a reliable indicator of the country of origin. Many companies operating in Indonesia can be owned and operated by foreign nationals, including Chinese controllers, either directly or through nominee arrangement. However, it is safe to conclude from OJK's analysis that at least half of the apps have been owned and operated by Chinese-linked companies. Taking into account that almost all blocked apps were conducting payday loan activities, and OJK's assessment of the registered payday loan businesses, it is clear that this sub-sector of fintech lending is largely operated by Chinese-controlled companies.

THE IMPACT OF CHINESE CAPITAL ON INDONESIAN FINTECH DEVELOPMENT

A. General Perception on the Impact of Chinese Capital in Indonesian Fintech from a Market Perspective

Indonesia's fintech growth since 2016 and its rapid market adoption since 2018 are undoubtedly fueled by funding from China—exponential growth in e-payments and online lending cannot be separated from investments by companies connected to China. The development of Indonesian companies also mirrors that of China's earlier digital path. Similarities include:

- Focus on transactions through payment facilitation and the extension of various financial products built on top of the platform (from loan, insurance, and wealth management), mirroring the Chinese models of Alibaba or Wechat and contrary to the more prominent use in the U.S. of advertising-based businesses like Facebook or Google²²;
- Strong emphasis on the online-to-offline (020) model, in which a mobile phone is used for physical payment (for example, for QR-based payment) or brick-andmortar outlets or individual agents facilitating online transactions that eventually bridge Indonesians without mobile internet access; and
- The emergence of "super-apps" to aggregate different services—again mirroring Alibaba or Wechat, in contrast to the more fragmented services and products, in which consumers still prefer to use different apps to perform different transactions/ functions, prominent in the United States.

In 2017, Adrian Li, a reputable venture capitalist, argued that three metrics in particular reveal that Indonesia is a lot like the China was in 2007/2008: "e-commerce as a percentage of retail sales (1.4 percent in 2015), Internet penetration (28 percent in 2015) and GDP per capita (\$3,834 in 2015.) The economy grows about five percent annually, e-commerce is expanding rapidly (by \$10 billion a year and forecast to hit \$130 billion by 2020), and smartphone use is forecast to swell to 100 million by 2020. All that, coupled with weak infrastructure and poor logistics systems, makes it an especially big opportunity for e-commerce growth." (Li, 2017)

Another reason the Chinese model works better for Indonesia compared to the U.S. model results from the revolutionary impact of mobile internet on daily activities. In China (2007) and Indonesia (2016), the rise of the digital economy coincided with the growth of mobile internet penetration, and therefore changing habits to incorporate mobile internet use is relatively easy. By contrast, in the United States consumers had internet access before the rise of smartphones, so "the landscape was pretty much set when iPhone was introduced: Facebook in social, Twitter in news, Google in search and Amazon in e-commerce." (Zhao, 2019)

²² Amazon is the exception, rather than the rule

For this reason, Chinese investments and technologies are perfectly suited to support the growth of Indonesia's digital aspirations. They understand the Indonesian market better and may be able to replicate the formula that produced Chinese success with some degree of adaptation for the Indonesian market.

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B. Public Anger Directed Towards Fintech Payday Lenders Associated with Chinese Operators

One of the key complaints raised by consumer groups is the feeling of that existing personal data protection systems are inadequate to govern fintechs and this has led to data abuse by the majority of fintech payday lenders. Many fintech payday lenders used the borrower's contact data to call close relatives without the consent of the borrower or the borrower's relative, for repayment. As discussed in part B of this paper, the rapid development of the fintech industry has left Indonesian regulators catching up to a more adaptable industry, and this leaves regulators reacting to the industry as it innovates to meet consumer needs rather than trying to anticipate consumer needs and control the industry's development. In many ways, this catching-up by regulators feeds into public perception that fintech lenders, and especially Chinese fintech lenders, are bypassing, ignoring, or undermining Indonesian regulations.

One of the key complaints raised by consumer groups is the feeling of that existing personal data protection systems are inadequate to govern fintechs and this has led to data abuse by the majority of fintech payday lenders. Many fintech payday lenders used the borrower's contact data to call close relatives without the consent of the borrower or the borrower's relative, for repayment.

These collection calls were problematic not only because of how the data is used, but because of the behavior of the debt collectors. In early January 2019, the cybercrime unit of POLRI arrested three employees working for a Chinese-owned fintech payday lender called V-Loan. They were charged with committing threats and persecution during debt collection calls. The owner of the company, a Chinese national, fled Indonesia and has not since resumed business operations in Indonesia.

During July through December 2018, there was a series of protests and mass rallies throughout urban cities in Indonesia attacking fintech payday lenders for improper behavior. Most of these protests were addressed to fintech lenders not registered with OJK, although a handful of registered fintech payday lenders were also the targets of public protests. In December 2018, the Indonesian Legal Aid Foundation (YLBHI), a reputable legal assistance organization in Indonesia compiled a list of violations committed by fintech payday lenders specific to personal data abuse:

- Access to sensitive personal data in the mobile phone (including contact list);
- Reach out and make call to any person in the borrower's contact list, without the borrower's consent; and
- Threats and persecution during debt collection calls.

The Indonesian Consumer Watch (YLBHI), a reputable NGO on consumer affairs, recorded 234 consumer complaints about fintech lending—all of which regard payday loans (Reily, 2019), while as of February 2019, YLBHI has received more than 3,000 complaints about payday lenders (Heriani, 2019).

In February 2019, a local taxi driver committed suicide after failing to repay his debt and being chased aggressively by fintech payday lenders and their debt collectors. An investigation by OJK showed that he had borrowed from more than 10 fintech apps, most of which were unregistered apps, allegedly Chinese-owned. The authority could not make direct attribution which app caused the victim to commit suicide.

In response to the growing concerns over personal data abuse, on 12 February 2019 under OJK Fintech Lending Department Director Letter No. S72/NB/13/2019, OJK issued a decree that restricts fintech lenders' access to mobile internet data, save for:

- (1) Microphone;
- (2) Camera; and
- (3) Location.

OJK requires all fintech companies to be audited under the framework of ISO: 27001 and found in compliance in order to be eligible for full operational licensing. This move is more restrictive than the previous letter issued on 17 October 2018 which prohibited access to "contact lists" and "other data unrelated to credit assessment." The Indonesian Fintech Lenders Association (AFPI), however, demands the right to also access app histories and call logs.

There are valid reasons for fintech lenders to challenge the OJK directive. As discussed in the first part of this paper, Indonesia has a weak credit reporting structure and its national ID system has not stopped widespread identity fraud. Providing consumer loans is therefore extremely risky because it is difficult to learn with whom a lender is dealing and their creditworthiness. Contact list assessment is one of the way that fintech lenders have developed to perform this assessment in the absence of a developed credit report or trustworthy identification system. For example, fintechs are able to analyze communication patterns to learn a great deal about someone who has applied for a loan. However, none of these reasons justify harassment and bullying of consumers or those on their contact lists, and this behavior violates both the ethical and legal use of personal data.

There is no direct relationship between the fintech operator's country of origin and its likelihood to commit privacy violations, but several factors feed the popular perception that it is the result of foreign, and specifically Chinese, involvement. The following three issues in particular have shaped the perception by regulators that China-linked companies not only contribute directly to the problems with payday lending in Indonesia but also risk inspiring other companies to employ abusive tactics to secure their financial interests:

- All consumer complaints about fintech lenders are about payday lenders. This is
 in part because higher value loans cater to more sophisticated market segments,
 such as SMEs, more wealthy borrowers, and the socio-entrepreneurs serviced by
 microfinance;
- Most fintech payday lenders (both registered and unregistered) are Chinese-

controlled;

 Despite high media coverage and public outcry (including a series of public protects by and for "fintech victims"), OJK so far has sanctioned only one registered company: Rupiah Plus (now Perdana), which is owned and operated by a Chinese national, and POLRI has made an arrest for online harassment to only one unregistered company: V-Loan, also owned and operated by a Chinese national.

At the end of the day, despite public concern about them, Chinese fintech operators are not particularly adept at bypassing Indonesian regulations. Even exploitation of regulatory gaps is not a core feature of Chinese fintech operators, except when it comes to personal data and customer protection in fintech payday loans.

There are certainly gaps in the regulatory environment in which fintech payday lenders operate that these companies have exploited in terms of data and consumer protection. But the actions of fintech payday lenders have alerted OJK, which has been keen to close those gaps. The business model for payday loans regardless of the origin of their control, on the other hand, does exploit the existing regulatory framework, which was not originally designed to govern payday loans. High interest rates, a lax approach to personal data protection, and aggressive debt collection are closely associated with fintech payday lenders. It happens that the majority of fintech payday lenders are linked to China, but there is no evidence that their poor behavior is the result of their Chinese connections and not the business that they're in. However, the connection has been enough to cause public outcry and consequences for Chineselinked firms.

There are certainly gaps in the regulatory environment in which fintech payday lenders operate that these companies have exploited in terms of data and consumer protection. But the actions of fintech payday lenders have alerted OJK, which has been keen to close those gaps. This is not evidence of failure, but evidence that the system addresses the concerns of consumers as service providers adapt to meet their rapidly evolving needs without restricting their choices or stifling innovation by blocking Chinese or other firms from the market without sufficient evidence. As such, there is no reason to believe that democratic or governance systems have been corroded by Chinese fintech operators in Indonesia.

B. Governance Challenges in Fintech Lending

Ever since the 1998 financial collapse, the Indonesian financial regulators (BI and OJK) have been focusing on detailed and specific regulations on financial prudence and market conduct. On one hand, this creates high barriers to enter into the Indonesian financial services sector. On the other hand, it also led to a large segment of the market not properly served. Since the fintech lending regulation was introduced in 2016, the requirements for fintech have been somewhat more open, but regulators have been expected to tighten the rules to be at par with the banking regulations. In addition, the open nature of the digital space further exacerbates the difficulties of controlling the entry and imposing barriers to the fintech market.

Below is the list of governance challenges that have been ill-used by the fintech payday lenders:

- Minimum guidance on interest rate, pricing transparency, and disclosure standards;
- Minimum guidance on data protection;
- Minimum guidance on debt collection standards;

- Insufficient credit information institutional governance to facilitate data sharing to minimize credit risk; and
- Free nature of market entry and almost zero barrier to market, with app store such as Google Play Store or Apple Store that act as "gate-keeper" to determine which application can be accessible to the consumers or not.

CONCLUDING REMARKS

The Indonesian digital financial market is growing exponentially, led by local and regional unicorns and independent tech entrepreneurs. This growth is happening most rapidly in two areas: e-payments and online lending. Chinese and Chinese-linked companies have been backing this growth through capital investments in and strategic partnerships with these leading companies. Some have attributed these capital investments to the similarity between Chinese and Indonesian markets being interpreted as an opportunity by Chinese opportunities to apply their knowledge from the Chinese experience to the Indonesian market.

In most cases, consumers enjoy the benefits that have come from fintech innovation. Retailers now have the ability to use digital payments at a lower cost than credit card payments, consumers who once lacked access to credit can now find willing lenders, and general financial consumers have more options for financial products.

This paper found no evidence of a link between Chinese fintech investors or operators and the Chinese government. Instead, each sub-sector of fintech has different levels of investment and control by Chinese investors, whether Chinese technology giants or independent Chinese investors. However, Chinese technology giants are predominantly found in e-payment, either as strategic investors in unicorns or as direct operators, arguably because e-payment is a capital-intensive business and only a few companies can compete in the market as it exists.

As is the case of many sectors (such as ride-hailing, hospitality, and fintech) and in many other jurisdictions, the key success factor of fintech has been about "creative compliance" with existing regulatory regimes in order to drive innovation and push the boundaries of what is permitted by law, but also to invent new ways of interpreting the regulatory environment to pursue their commercial objectives.

There is one area of fintech that has received completely negative coverage, not only from regulators but also from tech communities for the reputational damage they have caused to the whole industry: the area of payday lending. Payday lending grants micro consumer loans of up to \$140 disbursed in cash with repayment in full at the end of the month. These lenders charge ultra-high interest rates, up to 2% per day, prompting discussions about how to reduce the maximum interest rate. Some consumers of these loans borrowed from too many lenders, lenders failed to effectively screen for creditworthiness in their customers and failed to clearly disclose all penalties for delayed payments. This combination harmed some less aware customers in Indonesia.

Many payday loan operators acted unethically, but the fact that this sector is dominated by Chinese-owned or controlled companies is incidental and not the explanation for these practices. Hundreds and thousands of consumer complaints have been lodged to consumer organizations, legal aid, and regulators to report these practices of fintech payday lenders.

The remaining gaps in data and customer protection have breached ethical standards with tragic individual consequences. In response, the Indonesian government is working to fill these gaps.

This is not evidence that the system is broken, but that it is working. What remains crucial is that the regulatory environment is meant to facilitate the growth of the fintech sector instead of stifling it along the lines of the existing limitations for the traditional financial service institution.

As such, in terms of policy recommendations, consumer protection can be further advanced if the governance gaps are properly addressed. Rules on pricing transparency, data protection, and debt collection are emerging gradually to respond to the regulatory demands. The enforcement of these rules, however, will not be straight-forward considering any non-compliant firms can still offer their products and reach any consumer in the current structure of open digital market. Long-term institutional reform is therefore crucial, such as the development of a robust credit information institution because it will provide more comprehensive data in lending decisionmaking.

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