PwC Indonesia - Fintech Series

Indonesia's Fintech Lending:

Driving Economic Growth Through Financial Inclusion

Executive Summary

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Forewords

Mr. Rudiantara

Minister of Communications and Informatics

The digital economy is asserting its influence on how businesses operate, with business models finding ways to adapt as they enter into a new era of interconnectivity. Worth to mention is the rise of Fintech Lending as a new business model within the Financial Services industry. Despite having a significant amount of internet and smartphone users (178 million), the majority of our working-age population still have limited access to financial services. Through, its technologically-enabled business model, Fintech Lending is expected to expand financial services towards these previously untapped segments.

Ensuring the role of Fintech Lending as an enabler instead of disruptor is important to support its highest impact in Indonesia's financial inclusion and economic growth. As an enabler, Fintech Lending is expected to promote financial inclusivity by filling the gap that previously has not been provided by the traditional financial institution, through proper business conduct. As part of government, Kominfo is positioned to create a conducive information technology ecosystem, by ensuring customer protection, digital connectivity across Indonesia, and support for technological innovation.

Kominfo has been actively identifying and blocking illegal Fintech players that are

Mr. Wimboh Santoso

Chairman of Indonesia Financial Services Authority (OJK)

Indonesia recognises contributions from Fintech Lending as potential “vehicles” to promote wider financial inclusion which is necessary to fully optimise our economic potential. Despite having a significant amount of internet and smartphone users (178 million), majority of our working-age population still have limited access to financial services. Furthermore, MSMEs, which make up the majority of our productive sector also have limited credit access, leaving IDR 1,700 trillion in financing needs. Hence, it is imperative that financial inclusion becomes one of the main agenda for the Government to fulfil the gap and support economic growth. Through its unique business model, Fintech Lending is able to cater the underserved market by providing much needed access to financial services which were previously challenging to acquire for conventional financial institutions.

In 2018 alone, Fintech Lending provided financing access to over 600,000 individuals as well as created over 200,000 jobs. Total disbursed loan increased by 606% from March 2018 to March 2019. The significant growth is followed by various market and regulatory challenges, such as rising nonperforming loan (“NPL”), growing number of illegal players, and increasing bad publicity related to debt collection practices and data privacy in media, which affect customers' trust. Such challenges

Mr. Iskandar Simorangkir

Head of the Secretariat of DNKI Deputy Minister for Macro Economic and Financial Coordination, Coordinating Ministry for Economic Affairs Republic of Indonesia

The nexus between financial inclusion and economic development has been widely documented and recognized by policymakers in many countries. Financial Inclusion defined as the ability to access and use of a range of quality financial products and services, has been known to improve the economic welfare of millions of individuals and households. This, in turn, leads to poverty reduction and more inclusive growth.

Indonesia is a large developing country, with a long and rich history of financial inclusion. This started more than three decades ago, with a Government program that provided savings and loans to farmers and low-income households. In 2016, the Government took a more a strategic approach, by launching the National Strategy for Financial Inclusion (Strategi National Keuangan Inklusif, or SNKI), through the issuance of Presidential Decree (PerPres) No. 82/2016. The SNKI has allowed the Government to introduce integrated and systematic policies and programs in order to increase the financial inclusion of the unbanked and underserved segments of the population – with a view to achieving its goal of 75% of adults having access to financial services that are offered by formal financial institutions by the end of 2019. Perpres 82/2016 also established the National Council for Financial Inclusion (Dewan Nasional Keuangan Inklusif, or DNKI), which is a forum for coordinating and synergizing the various Government-supported financial inclusion programs.

not listed in OJK's database for customer protection, which ensure proper business conduct and prevent predatory lending of illegal players. Beside that, digital connectivity across Indonesia is supported through one of our main agenda, Palapa Ring, which aims to provide equal connectivity throughout 34 provinces of Indonesia. Additionally, without support in technological innovation, especially in the development of alternative credit scoring, ensuring the inclusiveness of Fintech Lending would be difficult. To support this, going forward, Kominfo will also drive forward the sector by facilitating digital entrepreneurship, fostering digital talent, as well as promoting future integrated database. By implementing these initiatives, Fintech Lending may ensure its path as an enabler to drives Indonesia's economy forward within the digital era.

require synergy and collaboration from stakeholders to ensure sustainable growth of the industry in the future.

Given the Fintech Lending industry is still in its infancy, the Government has used a principle-based and market conduct approach to craft regulations, to accelerate innovation, and drive collaboration between multiple stakeholders, while also ensuring customer protection. For example, OJK has established regulations concerning Digital Financial Innovation, Peer-to-Peer Lending, Equity Crowdfunding, Digital Banking, and regulatory sandbox, established OJK Fintech Center, officiated the Fintech Association (AFPI and AFI), as well as conducted the “Fintech Days” socialisation events as part of its strategic initiative to support the growth of Fintech Lending and propel innovation in Digital Financial services. By implementing these initiatives, we expect Fintech Lending to fulfil the financing gap, maintain a sustainable growth, promote financial inclusion and contribute in supporting sustainable economic growth.

Advances in technology, and their rapid adoption, have given rise to new technology-based platforms and innovative ways of delivering financial services. The number of so-called Fintech companies has jumped in recent years. In particular, the large micro-SME sector and the vibrant microfinance market in Indonesia have paved the way for the Fintech Lending industry to post significant growth. For instance, statistics from OJK reveal 1 licensed and 105 registered peer-to-peer lending companies in April 2019, a significant increase from the 1 licensed and 87 registered companies that existed in December 2018. These companies have also recorded a strong new disbursement rate, which achieved an accumulative value of IDR 37 trillion in April 2019, up from IDR 22.6 trillion in December 2018, involving more than 7.8 million borrowers. This represents a 63.3% growth rate in only four months, and the numbers are likely to increase further in the future.

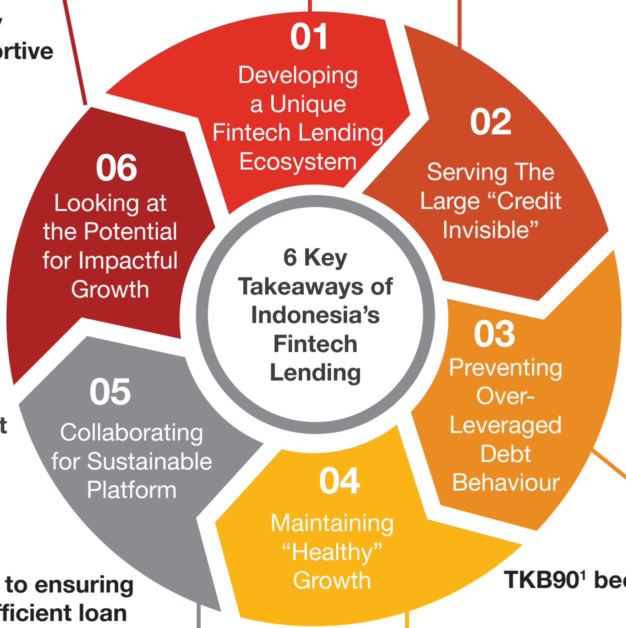
The Secretariat of the DNKI is continuously evaluating and seeking out new ways for financial services to be delivered more efficiently and effectively. This includes exploring the potential roles that Fintech Lending companies might play in supporting the Government's financial inclusion programs. Having said that, we view the Fintech Lending industry as a nascent and dynamic industry. Despite its potential benefits, there are still some unknowns with regard to the risks, impact, and sustainability of this fast-growing industry. In this context, we welcome the study that has been conducted by PricewaterhouseCoopers Indonesia, and hence the publication of this report. We believe that this report will help to increase our understanding of the current state of the industry, its business models, and its full potentials. Finally, we encourage continuing engagements between the various stakeholders in the Fintech Lending industry and DNKI, so that together we can reach the last mile of the financial inclusion journey in Indonesia.

Six Key Takeaways from Indonesia's Fintech Lending

Indonesia has a unique Fintech Lending ecosystem due the nature of its market and regulatory approach
The evolution of Indonesia's Fintech Lending, even though similar, is not necessarily comparable to other countries. **Majority of underserved individuals and MSMEs with limited physical and data access** create **differentiated business models**, supported by a **principle-based regulatory approach.**

Expanding the coverage of Indonesia's "Credit Invisible" may require a tailored approach
From 2018 users, at least **70% comes from the "Credit Invisible"** – individuals and MSMEs which previously had no credit access. There are also huge **untapped opportunities, especially outside Java and in specific sectors/verticals.** Due to **challenges in physical outreach and data availability,** innovation is required.

Future growth will be driven by cross-industry collaboration and supportive regulation
As a result of supportive regulation and increasing use cases, we estimate that Fintech Lending will have the potential to reach **accumulative loan disbursements of IDR 223 tn in 2020**. This will contribute to **closing IDR 19.3 tn** of **MSME financing gap** and **increasing the credit access of individuals in 2020 by 12.4%.**



An integrated lending database is required to prevent misconduct, especially over-leveraged debt behaviour
Debt refinancing appears to be one of the top three loan purposes, indicating the potential for **'over-leveraged' debt behaviour**. However, this behaviour may arise from **conventional-to-online lending, rather than among online lending.** Thus, going forward, an **integrated database** covering conventional and online lending **may be required**.

Collaboration is the key to ensuring stable financing and sufficient loan portfolio
As the industry grows, **balancing demand and supply** in the platform becomes **crucial**. Through **collaboration with Financial Institutions and tech companies**, players may have a **more stable source of funds**, while also **increasing wider-use cases of their loan portfolio**. Capability to develop collaboration becomes a **must-have competitive advantage** for players.

TKB90[1] becomes the "health" indicator of the industry
The growth of loan disbursements is subsequently followed by **the growth of NPL.** OJK is currently implementing TKB90 to ensure **players disclose their loan performance,** which may **prevent irresponsible disbursement**. In the future, **more transparency** will be **key to** ensuring **sustainability**.

1) Debt repayment success rate over 90 days past due, the opposite of default rate or Non-Performing Loan.

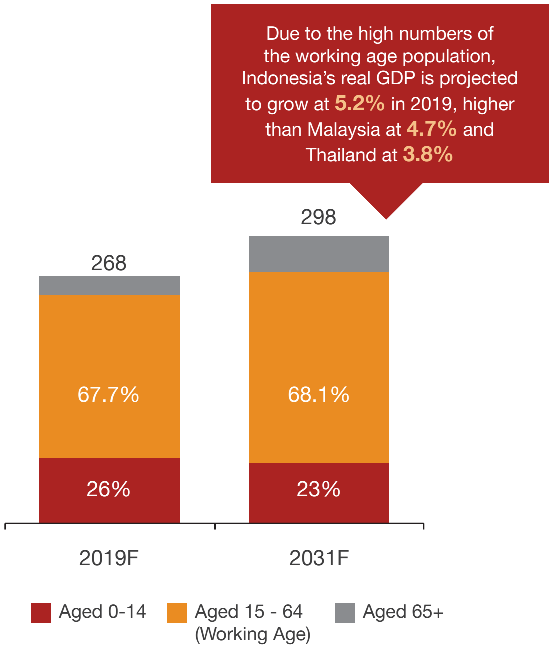
1 Fintech Lending as an enabler to drive the economic potential of Indonesia

Indonesia's demographic segments have unique economic potential that comes with certain risks

The large proportion of Indonesia's working age population has the potential to boost economic growth. However, even at the peak of its working age population, Indonesia will need to find ways to raise its GDP per capita to achieve comparable levels attained by other countries

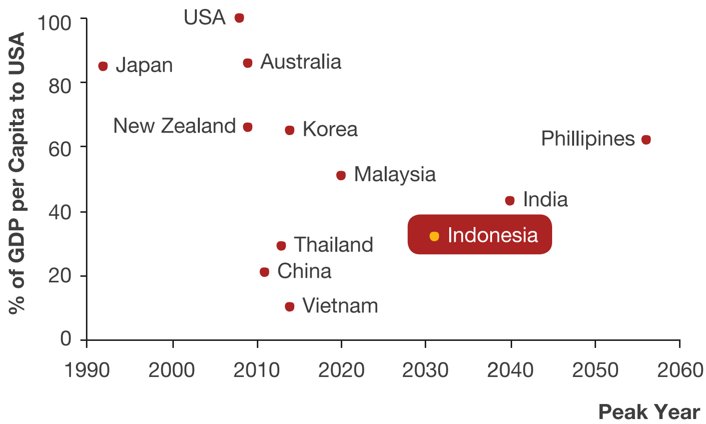
As the world's fourth most populous country, and with more than 60 percent of its people representing working age (*Fig.1*), Indonesia has unique economic potential. This working age population has the potential to drive Indonesia's Gross Domestic Product ("GDP") through consumer spending and local production capability, if it is fully utilised. However, according to the International Monetary Fund, Indonesia is projected to only produce 32 percent of the United States' GDP per capita even at its peak working age population in 2031 (*Fig.2*)[1]. This projection shows that there is a 'missed opportunity' for the large working age population to not experience the benefits of a higher GDP per capita.

Fig. 1 Population Based on Age
By millions of individuals, 2019F– 2031F



Source: Central Bureau of Statistics.

Fig. 2 Per Capita Income Level at the Peak of Working Age Population Share
By percentage of USA GDP per capita (PPP based)

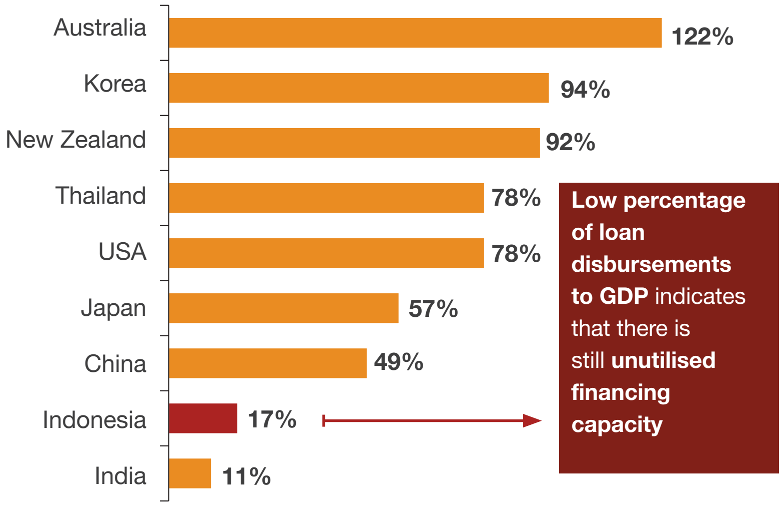


Source: Central Bureau of Statistics.

Source: [1] "Indonesia: Selected Issues" Report, International Monetary Fund (2018).

To maximise economic potential, access to financing will become one of the key prerequisites for Indonesia

Fig. 3 Household Debt per GDP by Country
By percentage, 2017



Source: International Monetary Fund; Asian Development Bank.

> **Without access to formal financial services, the unserved and the underserved segments of society will be excluded from growth and its benefits…**
>
> **… the effects of leveraging digital technology to bank the unbanked could boost GDP by 2% to 3% in markets like Indonesia".**
>
> **Asian Development Bank**
> (Accelerating Financial Inclusion In South-East Asia With Digital Finance, 2017)

To boost economic growth, providing equal access to financing will become important because it can create multiplier effects to the Indonesian economy

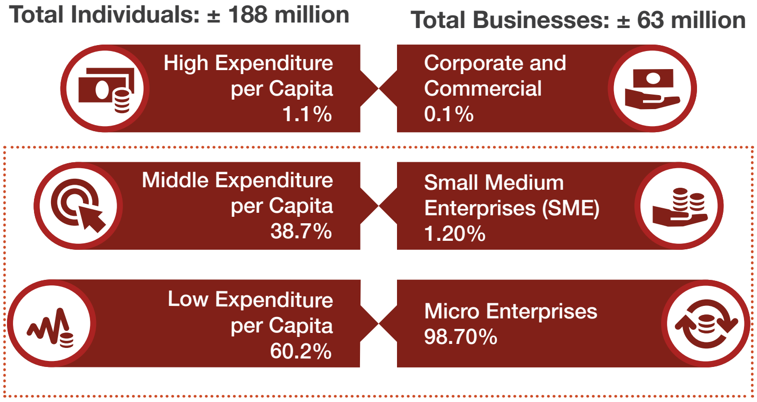
One of the key elements that can boost economic growth effectively is the utilisation of credit to boost spending and accelerate production capability. However, Indonesia had a very low loan disbursement per GDP compared to other countries in 2017 *(Fig. 3)*, indicating that its financing capacity is not yet fully utilised. Without better access to financing, it will be more difficult for individuals and MSMEs in Indonesia to become the engine of economic growth.

The majority of middle to lower segment individuals and MSMEs are still underserved by conventional lending providers

Opportunity arises from middle to lower expenditure segments and MSMEs since a majority are still underserved by financial institutions

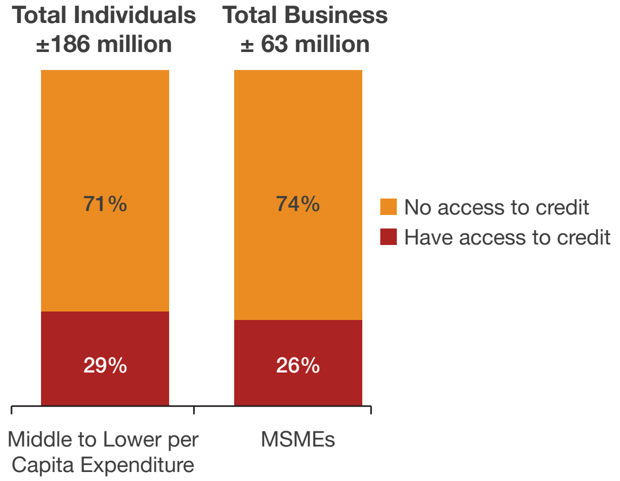
Individuals within the lower and middle expenditure per capita segment and MSMEs play significant roles within the Indonesian economy as they make up a majority of the population. Individuals of low expenditure per capita classification are the highest, at 60.2%, followed by middle expenditure per capita at 38.7%. Combined together, the middle to low expenditure per capita constitute for almost all of Indonesia's working age population, and yet most of them still do not have any formal access to credit. There are around a total of 186 million working age individuals (of middle to lower per capita expenditure segment), and 63 million businesses belonging to the MSME segment in Indonesia. Out of this total population, a majority of middle to lower income individuals and MSMEs still do not have access to credit (*Fig. 5*). Therefore, there is a huge opportunity for Fintech Lending to tap into this issue to help increase much needed access to credit.

Fig. 4 Indonesia's Working Age Individual Population and MSMEs
By percentage, 2018



Source: Central Bureau of Statistics.

Fig. 5 Access to Credit for Working Age Middle to Lower Individuals and MSMEs
By percentage, 2018



Source: Central Bureau of Statistics; Ministry of Cooperative and MSME; Central Bank of Indonesia.

Fintech Lending overcomes the challenges of conventional lending by providing multiple access channels for consumers

Conventional lending providers have certain limitations to provide sufficient financing access to the underserved markets. This creates room for innovation via Fintech to provide alternative solutions. Fintech Lending is able to address the challenges that conventional lending providers face by utilising a combination of different business models, technology, and innovative approaches. Thus, allowing them to achieve wider coverage within remote areas, solve infrastructure and risk management challenges that are typically faced by financial institution in serving untapped segments (*Fig.6*).

Some players even leverage innovative approaches to reach people who are "credit invisible", such as an Online-to-Offline ("O2O") channel as an alternative means to drive loan origination and disbursements for non-mobile phone users.

Fig. 6 How Fintech Lending overcomes Conventional Lending Providers' Limitations

	Conventional Lending Examples	Limitations of Access to Underserved Markets	How Fintech Lending Overcomes the Limitations
Formal	Banks Multi-Finance Companies Cooperatives Pawn Shops	Requirement for **physical verification and high cost to scale;**	Utilise **digital footprint as a substitution for physical documents** for verification and / or usage of **third-party data** (e.g. e-commerce) in order to define eligibility, which **lowers operational cost** compared with conventional lending;
		The underwriting process **requires a credit history or proof of a steady income,** which **asset-based collateral are required;**	Processed the **underwriting assessment** through **digital processing platform with various data points**, to identify **typical attributes for interest rates charge** without prior collateral;
		For Cooperatives, relatively **small ticket size** and **lack of competitiveness** to attract money supplier in the market;	Developed a **simple and convenient platform for investment**, as most of the process are done through digital platform, which **attracts large number of potential lenders.**
Informal	Loan Sharks	**Irrational credit risk assessment with limited funding.**	Customised **credit assessment models**, which **utilise behavioral data** to identify **typical attributes for interest rates charge**, supported with large number of funding from retail and institutional lenders.

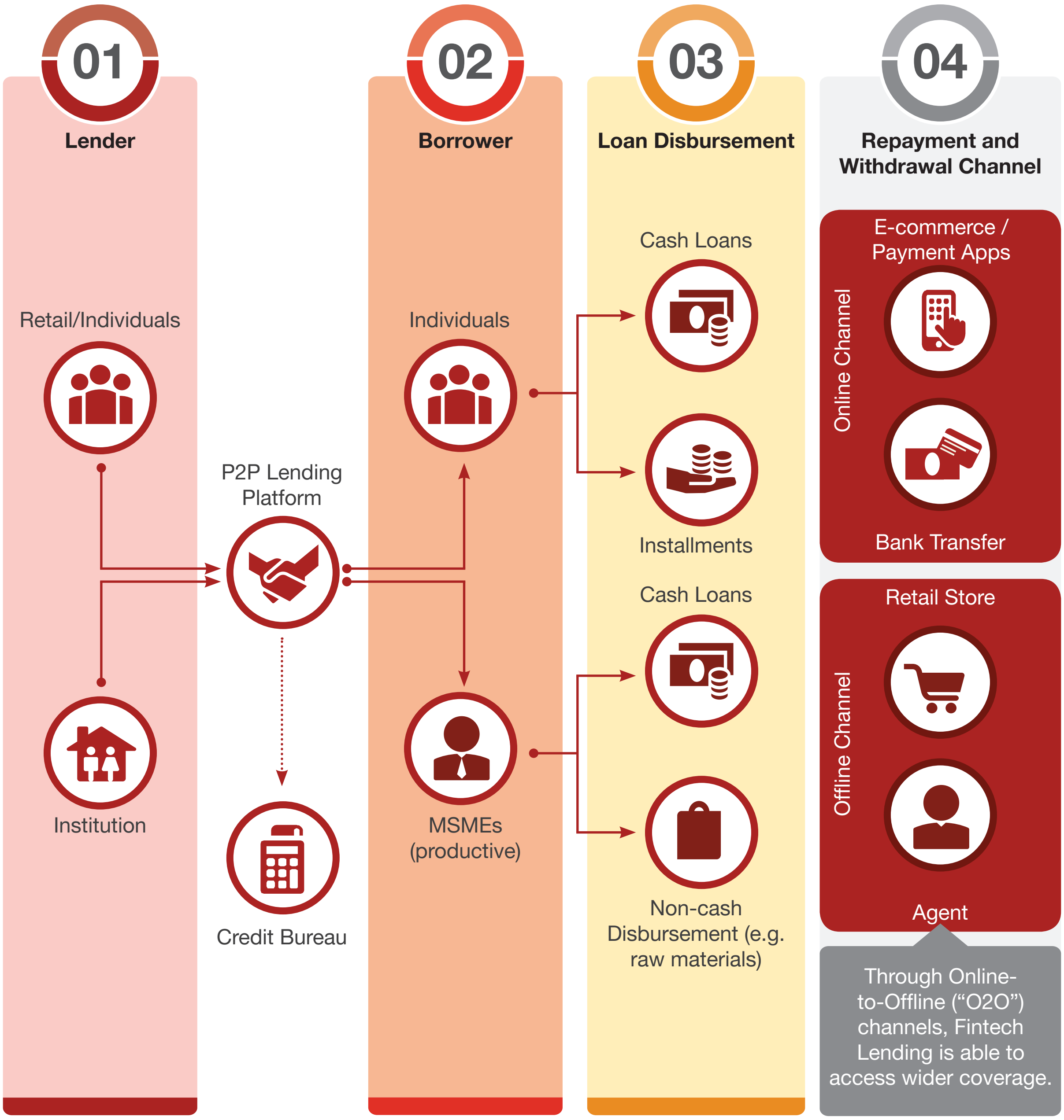
Source: Otoritas Jasa Keuangan (OJK).

Fintech Lending provides a dynamic model for lending and borrowing

There are various methods of loan disbursement and repayment within the Fintech Lending business model, which creates the formation of multiple access channels for consumers. The typical marketplace model (*Fig. 7*) can be broken down into four aspects. First, there are lenders (whether individuals or institutional), who have excess capital and are willing to lend it for a certain level of return. Then there are borrowers (whether individuals or productive MSMEs), who have submitted their loan request to the P2P Lending platform. The P2P Lending Platform then acts as a marketplace that matches borrowers' loan needs to the financing capital provided by lenders. Besides acting as a "connector", the P2P Platform may also utilise the services of a credit bureau to analyse a potential borrower's credit history and assess the risk of the loan.

Within the third phase (or the loan disbursement phase), individual borrowers can either receive a full cash or instalments disbursement. Enterprise borrowers have the option of accepting their loan disbursement in cash (fiscal payments format) or a non-cash disbursement that, for example, could be raw materials needed for their businesses. Finally, the repayment and withdrawal channels may typically have both online (e-commerce or bank transfer) and offline (payment through retail stores or agents) options. Thus, by utilising the online-to-offline model, Fintech Lending is able to achieve wider coverage.

Fig. 7 Typical Marketplace Model of Fintech Lending



Enabling coverage towards underserved markets that results in an end-to-end impact towards society

Fig. 8 Impacts of Fintech Lending

Raw Materials... >

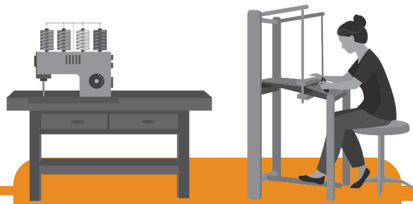
Saefuddin (Farmer)

Fintech Lending has helped him to **expand his land ownership** and to obtain farmer training.

...Processing... >

Ratna (Doormat Craftswoman)

Fintech Lending has enabled her to **obtain working capital** to start a doormat business.



... to End Users >

Mulki (Student)

Fintech lending has enabled him to **afford his university tuition** and to obtain his Bachelor degree.

Although Indonesia's Fintech Lending is often compared to China, it has a different model and ecosystem

Indonesia has huge market potential in Fintech Lending with similar macroeconomic and socio-economic conditions that are comparable to the rise of China's Fintech industry in 2013. China's market and business model targets the hundreds of millions of lower-income individuals who do not have credit cards, which resulted in a majority of Chinese P2P players offering short-term consumer loans. Indonesia, for its part, is targeting both underserved individuals and MSMEs, which provides a balanced mix.

China started to implement increasingly strict regulations (with stringent compliance procedures) in 2017 to eliminate the growing number of "delinquent" P2P Lending platforms, which resulted in a negative effect of a market fall-out. From the start, Indonesia's regulatory framework has taken a principle-based and collaborative approach, which aims to control the market and minimise the proliferation of "delinquent" platforms that operate in an unethical manner, while enabling the ecosystem to grow.

Thus, Indonesia has benefitted from analysing China's initial condition, which has shaped the Government to take a more principle-based approach.

Fig. 9 Comparison of Indonesia's Fintech Lending with China

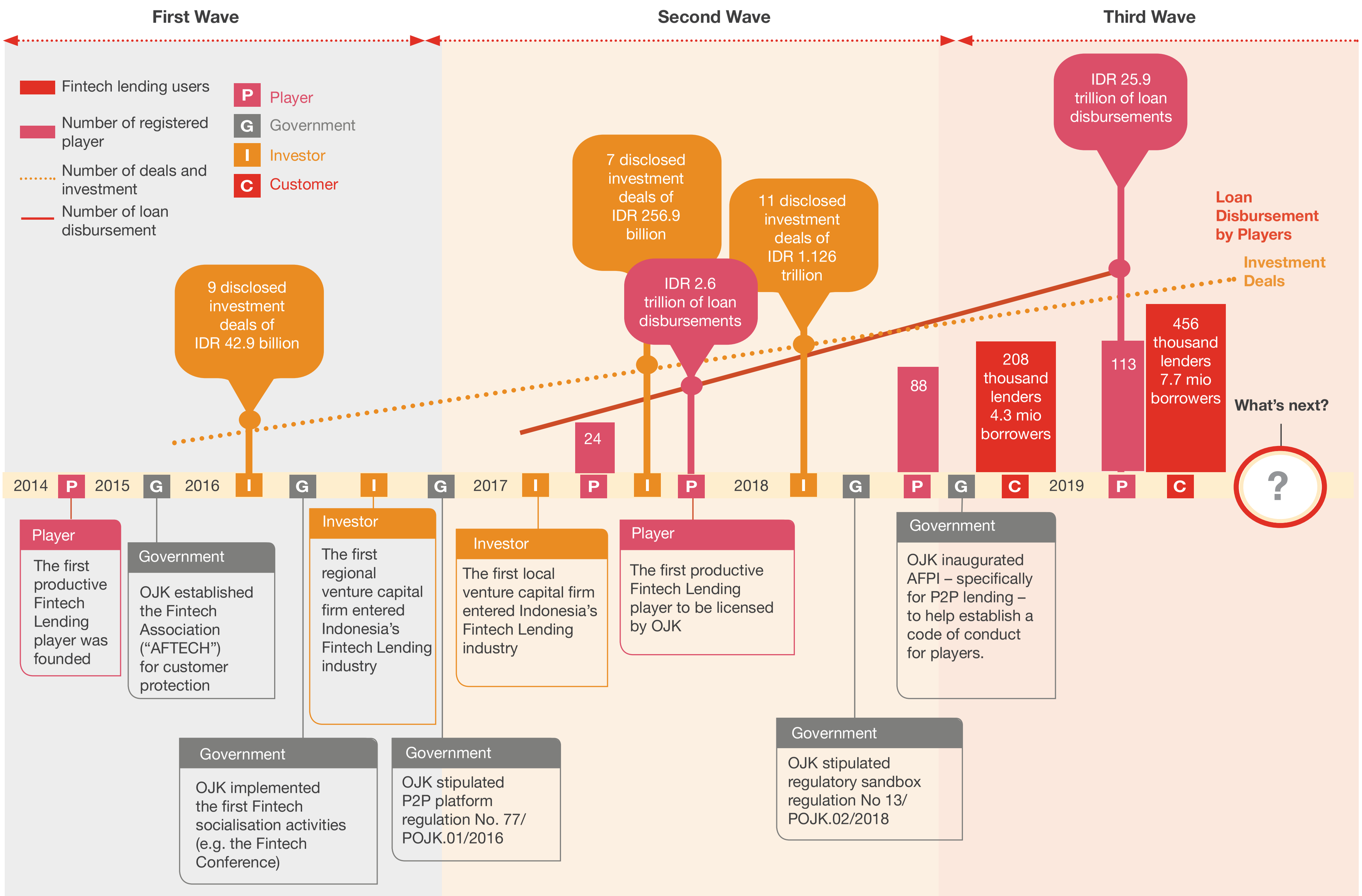
	Indonesia*	**China (2013 – at the rise of P2P industry)***
Market and Business Model	• Population of below middle class segment approximately 0.2 billion; • Indonesia internet penetration 54.7%; • Credit card penetration is limited to 6%; • Targeting both underserved MSMEs and individuals, as shown by the balanced mix of productive and consumptive players.	• Population of below middle class segment approximately 1 billion; • China's internet penetration at the rise of the P2P industry was at 45%; • Credit card penetration at the rise of the P2P industry was limited at 15%; • Targeting individuals without credit cards, as shown by the majority of the players being consumptive short-term loan providers
Regulatory Framework	• **Time Frame:** Regulated early by POJK 77/2016 (at the start of the industry); • **Regulator Approach:** Principle-based and collaborative approach through inauguration of AFPI as a centre of collaboration; • **Infrastructure:** Financial Information Services System (SLIK) by OJK opened for access only to financial service providers, P2P will only have access with new *Pusdafil*.	• **Time Frame:** P2P regulations only started to become properly enforced around 5 years after start of industry; • **Regulator Approach:** Increasingly strict regulations to eliminate unqualified P2P Lending platforms were applied later in the industry (starting in 2017), resulting in stringent procedures for compliance; • **Infrastructure:** China Credit Reference Center by the People's Bank of China opened for access by P2P platforms.

Note: *) Indonesia's current state of Fintech Lending market is comparable to China's market condition around 5 years ago (during 2013), as the introduction of the P2P model in China started earlier than in Indonesia.
Source: CNNIC Report; APJII; CMSPI; Euromonitor; SME Finance Forum.

Indonesia's Fintech Lending is currently in its "Third Wave" which is defined by a principle-based regulation approach

PwC defines the industry evolution of Fintech Lending based on the level of regulatory involvement, business model milestones, and key investments. Through the establishment of AFPI, Indonesia is currently entering the "Third Wave," *(Fig. 10 and Fig. 11)* where players have a clearer code of conduct, the government has a better view for licensing legal players, and investors also have higher confidence to invest in or acquire Fintech Lending companies. This differs from the previous waves where the "First Wave" marked an era where players were testing out business models with regulation that have yet to take the right form, and the "Second Wave", which marked the involvement of OJK to ensure customer protection by establishing distinction between legal and illegal Fintech Lending players.

Fig. 10 Milestones in Indonesia's Fintech Lending



Note : Data as of April 2019
Source: OJK; DailySocial; Crunchbase.

Indonesia's Fintech Lending ecosystem is unique, given that the Government has been proactive in nurturing the industry through the Financial Services Authority ("OJK") since the beginning. Traditionally, the Indonesian government's approach is conducted by introducing regulations through a prudent approach. With Fintech, however, the government has been using a principle-based approach due to its promotion of financial inclusion and the nature of innovation that it brings.

Through this approach, OJK is overseeing Fintech from a high-level perspective; ensuring players observe a proper market conduct in their operations. In addition, the Fintech Lending Players Association ("AFPI") was created by the OJK in 2018 to be the centre of collaboration between regulators and players, creating a more collaborative approach towards innovation and customer protection.

Fig. 11 Fintech Lending Industry "Waves"

	01 First Wave	02 Second Wave	03 Third Wave
01 Regulations Milestone	The beginning of Fintech socialisation activities with help of OJK and the Fintech Association (e.g. the Fintech Festival)	• The release of Fintech Lending regulations (i.e. POJK 77) • The tracking of Fintech Lending performance under OJK	The establishment of the Fintech Lending Association (AFPI)
02 Business Models Milestone	Entrance of mostly productive loan providers (41%), but **none of the Fintech Lending players are registered/licensed** under OJK	• Rise in the number of **productive loan providers registered** under OJK (63%) • Release of the first OJK license status for a productive Fintech Lending player	• Rise in the number of **consumptive loan providers registered** under OJK (49%) • The addition of six players with OJK license status as per May 2019.
03 Investments Highlights	The entrance of **regional venture capital** firms	• First acquisition of a Fintech Lending player by a multi-finance company • Participation of **local, bank-backed, and international venture capital firms**	**Acquisition/ partnerships** of registered Fintech Lending players **by other companies** (from Payment to e-Commerce)

2 Discovering underserved yet creditworthy individuals and MSMEs

The Voice of the Borrowers in a Nutshell

01 **“We believe that social media and word-of-mouth have been driving our attention towards Fintech Lending”**
Yet there are other channels that can be leveraged, including web searches, e-commerce apps, billboard ads, TV and radio, and marketing events.

02 **“We value fast disbursements and simple processes, but licensing/registration status has not become our main priority yet”**
What really matters to borrowers is speed of loan disbursement and a simple application process.

03 **“Even though only 2.4% of us have experienced defaults, we may still over-leverage our debt across online and conventional lending channels”**
Connectivity between *Pusdafil* and other data repositories will be crucial to minimising ‘over-leveraged’ debt behaviour.

04 **“Fintech Lending improves the quality of our lives/businesses, but we expect improvements in transparency. We (productive and consumptive borrowers) also expect a better app experience to increase our retention”**
Returning productive borrowers expect greater ticket sizes and improved app functionality, while returning consumptive borrowers expect better financing options and app user experience.

05 **“We believe that players still need to convince the rest of us to become borrowers, especially by offering more competitive interest rates and secure data protection”**
For the consumptive segment, individuals who are non-borrowers indicated concerns regarding the possibility of fraud, whereas high interest rates are the main concern for the productive segment.

06 **“We know how the interest rates are charged and assessed, but we expect certain limits to interest rates and a standardised collection procedure”**
Customers expect the Government to enforce more on limiting maximum interest rate and standardising debt collection

The Voice of the Lenders in a Nutshell

01 **"Most of us are digitally savvy, and used to conducting investments through digital channels"**
Lenders mostly come from the "millennial generation" (78% of lenders are under 30 years old), and are highly exposed to digital products.

02 **"Despite experience with loan defaults, we are still interested to invest in Fintech Lending"**
Although 24% of lenders have experienced defaults, many are still interested to continue investing as the occurrence of default is still low.

03 **"In the future we expect better loan quality and more responsive customer service to improve the investment experience"**
Lenders still have high expectations towards players to improve the loan quality and the investment experience of using the Fintech platform.

04 **"As potential retail lenders, we are hesitant to try Fintech Lending due to credibility concerns"**
Issues concerning fraud and liquidity access act as a barrier for potential lenders to use Fintech Lending platforms.

05 **"As institutional lenders, we want to come in, but we also want to keep our 'Way-to-Play'"**
Institutional lenders have their own prerequisites that need to be addressed before collaborating with a Fintech Lending player.

3 Providing robust financing through collaborations with financial institutions

The Voice of the Players in a Nutshell

01	**“We believe that Fintech Lending is not merely Peer-to-Peer (‘P2P’); we see a shift towards the Institutional-to-Peer (‘I2P’) model”** Sustainable source of funds become important to cater the high growing demand of Fintech Lending. Thus, half of the players are starting to engage more institutional lenders in their lenders base.
02	**“Going forward, risk management is our priority to maintain growth while expanding business in current segments”** Looking at the decreasing rate of expected future growth, many players emphasise on the importance to develop more prudent risk management.
03	**“Partnerships with financial institutions are important, but the challenging part comes from technology integration and compliance”** Partnership with Financial Institutions can provide a more stable source of fund and benefits from sharing infrastructure, but challenges arise due to differing capabilities.
04	**“We are aware of the licensing requirements, but we still face challenges due to infrastructure and the different nature of each business model segment”** The major issue tends to be the readiness of players to comply with the licensing requirements, due to the various business models of Fintech Lending players resulting in differing capabilities, infrastructure setup, and needs.
05	**“Although *Pusdafil* has been initiated, integration towards other platforms remain a challenge”** The establishment of *Pusdafil* data repository will gradually address the data access limitation. The next milestone would be ensuring its connectivity with other financial data repository, maintaining fairness of usage and neutrality.

4 Seeking new "Unicorns" in the new way of lending

The Voice of the Investors in a Nutshell

01	**"We are optimistic towards the Fintech Lending industry, as there is large demand across Indonesia"** There is still unmet demand for loans due to the limited access of financing in Indonesia that can be catered by Fintech Lending, further supporting investors' optimism towards the industry.
02	**"We see the potential of Fintech Lending to fulfil our objectives, whether these are financial or strategic returns"** Investment deals have been pouring into the industry (Total of IDR 1.4 Tn for FY18), for the end-goal of realising either financial or strategic returns.
03	**"We see unique 'power-in-the-market' for each Fintech Lending verticals and believe that suitable risk management is important"** Investors see promising potential in the market of each Fintech Lending verticals and believe that the players should take risk management approaches that are suitable for the market they serve.
04	**"Going forward, our preference for 'healthy' growth may require players to have a better approach to manage their loan quality"** Investors are becoming more concerned about the quality of loans as the Fintech Lending industry expands significantly over the past three years. There are rising expectations that players should be more prudent in their loan disbursements especially given recent reporting requirements.
05	**"We believe that Fintech Lending Unicorns will arise from different verticals as the industry grows"** Indonesia's market is supportive towards the growth of new Unicorns, especially from the Fintech Lending sector due to the market potential of its many verticals.

5 Achieving financial inclusion by supporting innovation

The Voice of the Government in a Nutshell

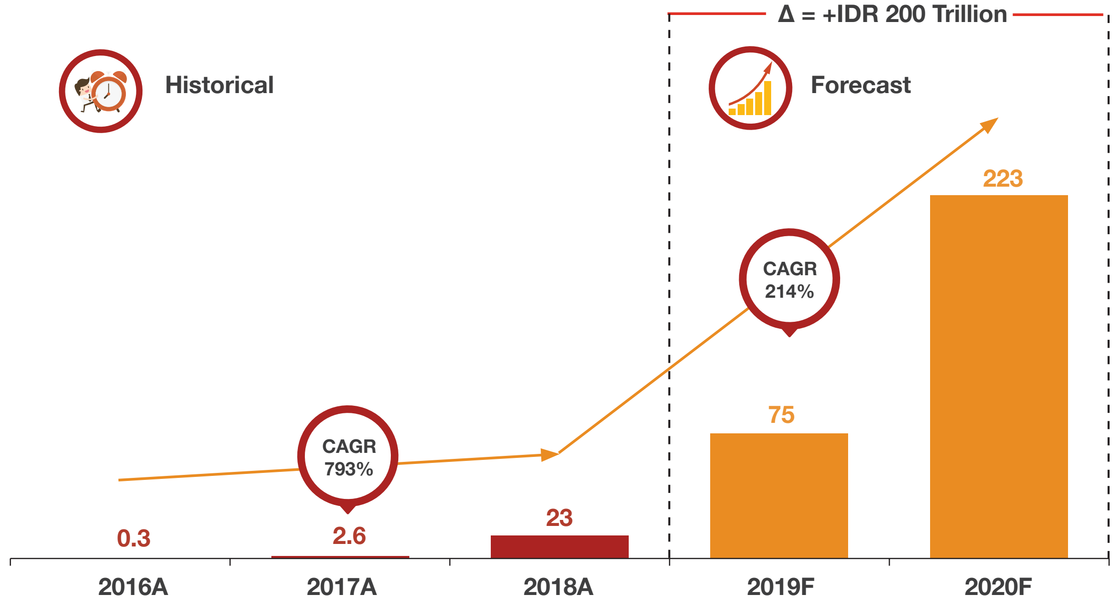
01	**"We believe that the rise of Fintech Lending creates positive impacts for all Indonesians"** Large potential impact of Fintech Lending in driving the Indonesian economy through increased credit access for MSMEs and individuals, more investments and job opportunities.
02	**"We see the potential of Fintech Lending in contributing to the financial inclusion agenda"** With its innovative business model, Fintech Lending supports and contributes towards relevant SNKI financial inclusion initiatives by expanding the target market reach.
03	**"We adopt a principle-based approach in regulating the industry in order to create a conducive Fintech Lending ecosystem that ensures customer protection while supporting innovation"** Through principle-based approach, government set the guiding principle for the creation of regulations that protects the customers, while allowing players to innovate.
04	**"We are aware of the concerns of other stakeholders and, going forward, we will support them through our initiatives"** The Government created and will implement key initiatives to mitigate some of stakeholders' concerns.
05	**"We believe that Fintech Lending players should collaborate with third parties to create a bigger and more interconnected ecosystem"** Collaborating or utilising third parties could help players to invest more time and resources into their core lending business.

6 Looking at future growth and how it will affect Indonesia's financial inclusion

Fintech Lending will reach IDR 223 trillion of accumulative loan disbursements in 2020

The growth in Fintech Lending loan disbursed throughout 2016-2018 demonstrated a significant historical record of accomplishment. Fintech Lending is forecasted to have a growth rate of 214% from 2018-2020.

Fig. 13 Projected Loan Disbursements (Accumulative)
In IDR trilion, 2016A - 2020F



Source : Otoritas Jasa Keuangan; World Bank.
Note : Fintech Lending market here specifically refers to P2P model

Key Drivers	
01	**Mobile phone subscription** growth is steady going forward, which supports the awareness and adoption rate of Fintech Lending;
02	The increasing **use cases of Fintech Lending**, as a result of collaborations with other digital platforms (e.g. e-commerce, ride-hailing, logistics) and acceptance from various customer segments;
03	The development of supportive **IT infrastructure and digital IDs**, resulting in wider coverage and faster KYC processes, which will produce a **steady retention and adoption ratio.**

By 2020, Fintech Lending has the potential to add IDR 19.4 Trillion to the MSMEs financing gap while increasing credit access for individuals by 12.4%

Fig. 14 Fintech Lending Potential Impact to Close the MSME Financing Gap and Individual Credit Access

2018	2019	2020
IDR 4.3 tn Estimated additional credit access to MSMEs from Fintech Lending	**IDR 7.5 tn** Estimated additional credit access to MSMEs from Fintech Lending	**IDR 19.4 tn** Estimated additional credit access to MSMEs from Fintech Lending
2.4% Contribution to individual credit access	**4.9%** Accumulative contribution to individual credit access	**12.4%** Accumulative contribution to individual credit access

Source : Global Findex 2018; Otoritas Jasa Keuangan; PwC Customer Survey.

Note : Contribution to individual credit access is calculated based on the addition of individuals on top of those that have borrowed from a financial institution or used a credit card according to 2018 Global Findex

Fintech Lending helps to increase financial inclusion for Indonesia by potentially providing additional credit accesss to those that were previously not catered or underserved by formal financial institutions. The numbers tell the story: in 2018, additional credit access for MSMEs is estimated to be IDR 4.3 trillion, while in 2019 the additional credit access will be IDR 7.5 trillion and IDR 19.4 trillion in 2020. Credit access for MSMEs allows for better liquidity management and provides leverage that enables expansion, therefore resulting in better business capabilities.

Accumulative contribution by Fintech Lending to individual credit access may increase up to 4.9% in 2019, and is expected to further increase up to 12.4% in 2020. The increased credit access for individuals can result in an improvement of their living quality by driving consumptive purchasing power.

By taking advantage of Fintech Lending, many businesses and individuals alike will have increased access to economic participation as they gain access to previously unavailable opportunities. For example, traditional retail businesses that do not have credit history and collateral are not able to have credit facilities from financial institutions to expand their business. There are also cases where individuals who were previously employees were able to become entrepreneurs by taking loans from Fintech Lending to open up their business. In these cases, Fintech Lending increases credit access to untapped segments and serves as a key driver towards expanding the economic opportunities for all segments of the Indonesian society.

Fintech Lending is estimated to generate IDR 45 trillion of GVA through productive loans while consumptive loans is estimated IDR 35 trillion of GVA throughout 2018-2019

Fig. 15 **Economic Impact Analysis**
2018 - 2019

Productive Purpose	Consumptive Purpose
IDR ± 45 tn	**IDR ±35 tn**
Estimated Gross Value Added enabled by Fintech Lending for Productive purpose throughout 2018-2019	**Estimated Gross Value Added enabled by Fintech Lending for Consumptive purpose throughout 2018-2019**

Note : Fintech Lending market here specifically refers to the P2P model. The estimated economic impact is based on direct, indirect, and induced impact from loans (both productive and consumptive) enabled by Fintech Lending. Actual economic impact of Fintech Lending might be higher than the estimated above.
Source : Central Bureau of Statistics; Otoritas Jasa Keuangan; PwC Customer Survey.

The economic impact of Fintech Lending in Indonesia was estimated using the Input-Output (I-O) Model, by measuring the gross value added (GVA) in three categories: direct, indirect and induced impact. Direct impact refers to the initial economic impact from the sale of goods and/or services generated by a business that has loans from Fintech Lending. Indirect impact measures the economic impact generated from the outputs of relevant supply chain related to the business. Lastly, induced impact measures the impact of employee spending (both employees of the business and their suppliers).

Output of productive loan segment is projected to generate Gross Value Added (GVA) at an estimate of IDR 45 trillion during the 2018-2019 period. Meanwhile, consumer loans enabled by Fintech Lending are estimated to generate GVA at IDR 35 trillion for the 2018-2019 period.

Appendices

Appendix 1

The Voice of the Customers

PwC commissioned face-to-face surveys of 2,591 Indonesians in 18 cities. The surveys were conducted from February 2019 to March 2019. The respondents in each city were selected to reflect their location profiles, in terms of age, gender, employment status, monthly expenditure, and mobile phone ownership. We covered respondents with ages from 17 to 55, who were employed/ self-employed and married/single, with monthly expenditure ranges of between IDR 1.5 mn to IDR 10 mn, with mobile phones access. In addition, PwC also deployed another online survey to 101 MSMEs and 211 individual lenders across Indonesia.

The Voice of the Players

PwC conducted sixteen in-depth, face-to-face interviews with executives of productive and consumptive loan providers in Indonesia. We further deployed online surveys to all AFPI members and received 41 responses.

The Voice of the Investors

PwC conducted nine in-depth, face-to-face interviews with venture capital investors in Indonesia.

The Voice of the Government

PwC conducted in-depth, face-to-face interviews with Government-related entities in Indonesia, including Otoritas Jasa Keuangan (OJK), Dewan Nasional Keuangan Inklusif (DNKI), Kementerian Komunikasi dan Informatika (Kominfo) and Asosiasi Fintech Pembiayaan Indonesia (AFPI).

Appendix 2

Methodology - Economic Impact Calculation

The economic impact of Fintech Lending in Indonesia was estimated using the Input-Output (I-O) Model.
The I-O Model is a quantitative economic model that represents the interdependency between sectors in an economy. The I-O Model was developed to understand how much monetary unit of Input is needed to generate one monetary unit of output. The model was developed based on a 2014 I-O Table issued by the World Input-Output Database in 2016[1)], which consists of 56 sectors for Indonesia's economy.

The key components of the I-O Model are:

- The Output Multiplier, which calculates how much increased Output is needed in a particular sector to enable an increase of one Output in another sector; and
- The GVA per unit of Output.

The main focus of this assessment is about the impact of consumer spending in goods and services enabled by Fintech Lending. The consumer spending data was gathered through customer surveys mentioned above.
The economic impact of Fintech Lending was measured in terms of Gross Value Added (GVA) in three different categories:

A. In the case of productive loans, the direct impact refers to initial economic impact due to the sale of goods and/or services to end-consumers enabled by Fintech Lending. The Direct GVA is obtained by multiplying the total demand of goods and/or services (i.e. Output) with the GVA per unit of Output provided by the I-O Model.

B. Indirect (supply chain) Impact is generated in the supply chain of businesses as referred to in A above. To enable a business to produce goods and/or services, suppliers of such businesses need to produce their own Output. Similar to Direct GVA calculation, Indirect GVA is obtained by multiplying the total Indirect Output with GVA per unit of Output provided by the I-O Model.

C. Induced Impact measures the impact of employee spending (both the employees of the businesses and their suppliers). Employee spending will increase the demand for Output and, in turn, generate GVA.

All quantitative economic results presented are "gross," and are not "net/incremental" of what impact would have occurred without Fintech Lending (i.e. no opportunity cost). Therefore, the results do not consider displacement, substitution, and so forth.

Source : 1) Timmer, M. P., Dietzenbacher, E., Los, B., Stehrer, R. and de Vries, G. J. (2015), "An Illustrated User Guide to the World Input–Output Database: the Case of Global Automotive Production", Review of International Economics., 23: 575–605

Appendix 3

Definition

No.	Terms	Definition
1	Consumptive Loan Providers	1. Companies who provide loans for consumptive purposes; 2. Typical usage of consumptive loans include house improvement, education, holiday, wedding, medical expenses, etc.
2	Productive Loan Providers	1. Companies who provide loan for business use cases; 2. Typical usage of productive loans include capital expenditure financing, invoice financing, online seller financing, etc.
3	Hybrid Players	Fintech lending players that provide both consumptive and productive loans.
4	Unicorns	A start-up company with valuation of more than USD 1 billion.
5	Invoice Financing	A form of short term borrowing which is extended by the P2P platform to lender, to pay the borrower's unpaid invoices.
6	'Credit Invisible'	The segment of the population with no prior credit history.
7	Over-leverage	Undertaking of too many loans.
8	Underwriting	The process that a lender or other financial services use to assess the creditworthiness or risk of a potential customer.
9	Middle to Lower Segment Individuals (Age 15+)	1. Based on individuals of age above 15 years old according to the data from Central Bureau of Statistics; 2. Middle to Lower Individuals are categorised based on their expenditure per capita that are below IDR 5 million.
10	Underserved Individuals	1. Based on individuals of age above 15 years old according to the data from Central Bureau of Statistics; 2. Defined as the population with no formal credit history in general. In the survey, it is defined as individuals which do not have credit facility within the last 12 months from KUR, Conventional Bank, BPR, Cooperation, Pegadaian, Leasing Company, KUBER/KUB, BUMDES and other formal institutions.
11	Jabodetabek	Acronym for DKI Jakarta, Bogor, Depok, Tangerang and Bekasi.
12	Average Spending per Capita	Average Household Expenditure per Month / Population.
13	Internet Usage	1. Based on individuals of age above 15 years old according to the data from Central Bureau of Statistics; 2. Respondents or indviduals who used internet within the last 3 months.
14	Mobile Phone Usage	1. Based on individuals of age above 15 years old according to the data from Central Bureau of Statistics; 2. Respondents or indviduals who use mobile phone within the last 3 months.
15	Bank Penetration	1. Based on individuals of age above 15 years old according to the data from Central Bureau of Statistics; 2. Respondents or indviduals who have individual saving account or shared account.
16	Unbanked	People who have no access to financial services.

Appendix 4

Glossary

No.	Terms	Definition
1	AFPI	Asosiasi Fintech Pendanaan Indonesia (The Indonesian Fintech Lending Association)
2	AFTECH	Asosiasi FinTech Indonesia (The Indonesia FinTech Association)
3	Bn	Billion
4	CAGR	Compounded Annual Growth Rate
5	DNKI	Sekretariat Dewan Nasional Keuangan Inklusif (The National Committee of Financial Inclusion)
6	GDP	Gross Domestic Product
7	HH	Household
8	I2P	Institutional-to-Peer
9	IDR	Indonesian Rupiah
10	Kominfo/ KEMKOMINFO	Kementrian Komunikasi dan Informatika Republik Indonesia
11	KUR	Kredit Usaha Rakyat (is a credit or financing service provided by the government through banks to MSMEs or cooperatives that are feasible but not yet bankable)
12	Mn	Million
13	MSME	Micro, Small, and Medium Enterprises
14	NPL	Non-Performing Loan
15	OJK	Otoritas Jasa Keuangan (Financial Services Authority)
16	O2O	Online-to-Offline
17	P2P	Peer-to-Peer
18	POJK	Peraturan OJK
19	PPP	Purchasing Power Parity
20	Pusdafil	Pusat Data Fintech Lending
21	SME	Small Medium Enterprises
22	SNKI	Strategi Nasional Keuangan Inklusif (The National Strategy of Financial Inclusion)
23	SLIK	Sistem Layanan Informasi Keuangan
24	SOP	Standard Operating Procedures
25	TKB	Tingkat Keberhasilan Bayar / Loan quality repayment success rate that is reported up to 90 days after repayment due date
26	Tn	Trilion

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