CIPS
Center for Indonesian Policy Studies

Policy Paper No. 60

Unpacking The Fintech Regulatory Sandbox Framework in Indonesia:

Risks Management and The Data Privacy Imperative

by Trissia Wijaya

www.cips-indonesia.org

Policy Paper No. 60

Regulatory Sandboxing in Indonesia's Fintech Industry

Author:
Dr. Trissia Wijaya
Center for Indonesian Policy Studies (CIPS)

Jakarta, Indonesia
October, 2023

Acknowledgement:

This report was commissioned and supported by the Center for International Private Enterprise (CIPE), whose mission is to strengthen democracy around the globe through private enterprise and market-oriented reform. The views expressed in this report represent the opinions and analysis of the authors and do not necessarily reflect those of CIPE or CIPS or their staff.

The author would like to thank Muhammad Nidhal, and Biyan Shandy for the excellent research assistance.

Cover:
freepik.com/freepik

CONTENT

List of Tables

List of Figures

GLOSSARY

AFPI:
Asosiasi Fintech Pendanaan Bersama Indonesia (Indonesia Fintech Lenders Association)

AI:
Artificial Intelligence

AFTECH:
Asosiasi Fintech Indonesia (Indonesia Fintech Association)

ASEAN:
Association of South East Asian Nations

ASPI:
Asosiasi Sistem Pembayaran Indonesia (Indonesia Payment System Association)

BNPL:
Buy Now Pay Later

DFI:
Digital Financial Innovation or *Inovasi Keuangan Digital* (IKD)

DPA:
Data Protection Authority

E-KYC:
Electronic Know Your Customers

FCA:
United Kingdom Financial Conduct Authority

Fintech:
Financial Technology

ICS:
Innovative Credit Scoring

ISO:
International Organization for Standardization

ITSK:
Inovasi Teknologi Sektor Keuangan (Financial Sector Technology Innovation)

MAS:
Monetary Authority of Singapore

OECD:
Organisation for Economic Co-operation and Development

OJK:
Otoritas Jasa Keuangan (Indonesian Financial Services Authority)

OJK Infinity:
Innovation Centre for Digital Technology

P2P Lending:
Peer-to-Peer Lending

P2SK Law:
Law on Finance or Law No. 4/2023

PIC:
Person-in-Charge

POJK:
Peraturan OJK (Indonesian Financial Services Authority Regulation)

Regtech:
Regulatory Technology

SEOJK:
Surat Edaran OJK (Indonesian Financial Services Authority Circular Letter)

UNSGSA:
UN Secretary-General's Special Advocate for Inclusive Finance for Development

UK:
United Kingdom

EXECUTIVE SUMMARY

To accommodate Indonesia's quickly growing fintech industry, regulators have opted for a regulatory sandbox mechanism that bases the country's regulatory response to innovation on the results of live experiments. While they offer clear benefits, regulatory sandboxes can also be risky regulatory instruments.

This paper assesses the promises and pitfalls of the sandbox, focusing on the digital financial innovation (DFI) sector, a responsibility of Indonesian Financial Services Authority (*Otoritas Jasa Keuangan*, or OJK). The paper focuses on sandbox governance, its risk management mechanism, and co-regulation.

Sandboxes should be evaluated based on their effects on the firms that pass through their process, but this information is not collected in Indonesia. Instead, this paper considers (1) to what extent innovative technologies, products, and services have been developed to companies' full potential; (2) how participating firms cope with the post-exit mechanism; (3) to what extent the sandbox provides a mechanism for dialogue and adaptation of legislative solutions; and (4) how risks are managed in the sandbox.

We identify three challenges to the effectiveness of the DFI sandbox in Indonesia: contribution to an uneven playing field for DFI operators, a *lack of clarity* about the desired outcomes of the sandbox and how firms are meant to exit the sandbox, and insufficient resources for the sandbox to operate as intended. These challenges increase the potential that the sandbox framework creates legal uncertainty, imposes burdensome costs, and fails to prevent consumer harm.

Regulatory and governance improvements are essential to ensure the effectiveness of the sandbox framework. To this end, we make four policy recommendations.

- The newly passed Law on Finance should be used to support the OJK sandbox framework and provide clear parameters for issuing licenses, defining the goals of an OJK license, and improving the regulatory environment through input from the sandbox.
- Inter-agency coordination is required and should be accomplished through leadership from authority figures and the implementation of the Law on Finance.
- The co-regulatory approach between regulators, relevant ministries, and AFTECH should be strengthened to improve collaboration regarding the roles of data protection officers, risk assessments, the sandbox exit mechanism, and setting and evaluating sandbox goals.
- OJK must allocate sufficient resources to the sandbox process, specifically sandbox committees and representatives of operators applying to the sandbox, in order to ensure OJK can fulfill its supervisory obligations in the fintech space.

INTRODUCTION TO INDONESIA'S FINTECH INDUSTRY

Indonesia has emerged as a fertile ground for the financial technology (fintech) industry under a progressive regulatory environment, a growing middle class, and high penetration of smartphones.

"Indonesia has emerged as a fertile ground for the financial technology (fintech) industry under a progressive regulatory environment, a growing middle class, and high penetration of smartphones."

Indonesia has a large middle class, a high proportion of the population at prime working age, and one of the highest populations of internet users in the world.[1] The market is expected to grow,[2] and the government is making concerted efforts to expand financial inclusion as part of its national strategy.[3]

One observable development includes the increasing funding in the fintech industry that has led to exponential industry growth. According to Fintech in the ASEAN (2021), Indonesia absorbed 26% of the total US$3.5 billion in fintech funding to Southeast Asia, which amounted to about US$940 million. These funds went to almost every fintech category in Indonesia, a sign of a dynamic industry with a vibrant investment landscape.

There are four key categories of fintech companies in Indonesia, differentiated based on their business models:

- digital payment services;
- online lending;
- equity crowdfunding and;
- digital financial innovation (*Inovasi Keuangan Digital*, or DFI) products.[4]

These companies are regulated by one of two authorities: (1) Bank Indonesia, the central bank, which regulates fintech companies and products related to payments and (2) Financial Services Authority (*Otoritas Jasa Keuangan*, or OJK), which regulates financial services-related business, including DFI, online lending, and crowdfunding.

Key associations such as the Indonesia Fintech Association (AFTECH), the Indonesia Fintech Lenders Association (AFPI), and the Indonesia Payment System Association (ASPI) act as bridges between regulators and companies. Both Bank Indonesia and OJK have participated in co-regulation of the fintech sector with these associations.[5]

[1] In 2021, the World bank estimated that 52 million Indonesians belonged to the middle class, with 69% of the population being in the productive age (BPS, 2022). Indonesia has one of the highest numbers of internet users in the world, amounting to 77.02% of the entire population as the latest survey by APJII (2022) recorded.
[2] The 2022 e-Conomy report (Temasek, Google, Bain) forecasts ASEAN's gross merchandise volume to reach US$330 billion by 2025 and US$600 billion by 2030 across six countries of Indonesia, Singapore, Malaysia, the Philippines, and Thailand, hence boosting intra-regional trade (Baijal et al., 2022).
[3] On December 7, 2020, President Joko Widodo signed Presidential Regulation No. 114/2020 on the National Strategy for Financial Inclusion.
[4] DFI products include aggregators, electronic know your customer/e-KYC, property investment management, credit scoring, and Blockchain.
[5] For example, AFPI and AFTECH are formally acknowledged by OJK Regulation 77/2016 and 13/2018 as umbrella organizations with the authority to manage business permits and set ethical codes for their members, while Bank Indonesia Regulation 23/2021 reiterated ASPI's role as a self-regulatory organization that contributes to the development of and implementation of a national payment standard.

The amount of disclosed funding in Indonesia's fintech industry from 2020 to 2022 reached US$3.2 billion in 2022 (Kumar et al., 2023). According to data aggregated from TechinAsia (2023), payment fintechs received the greatest proportion (52%) of funding, followed by lending fintechs which accounts for 42% fintech funding in 2022. The DFI sector has also seen incredible momentum, securing funding of US$89 million in 2021.

The primary challenge facing the fintech policy environment is the need to ensure consumer protection while providing a competitive regulatory landscape conducive to innovation (Rumata & Sastrosubroto, 2020). Regulating a disruptive industry like fintech is difficult because most regulation is based on traditional business practices. The fast-changing nature of an industry like fintech and the slow pace of regulatory change creates a risk that policies will not accommodate innovation, and may even bring innovation to a grinding halt (Beaumier et al., 2020; OECD, 2019; Heeks & Bukht, 2020).

"The primary challenge facing the fintech policy environment is the need to ensure consumer protection while providing a competitive regulatory landscape conducive to innovation."

To mitigate this risk, the Indonesian government has established a light touch regulatory approach. One example is a regulatory sandbox. Bank Indonesia and OJK employ regulatory sandbox frameworks to allow companies to test their products, services, and business models with real consumers in a temporary, flexible regulatory or legal framework. Sandboxes give regulators space to formulate more responsive and better-informed regulation both by allowing innovation within the sandbox and informing regulation based on those innovations. This improves both regulatory standards and new business models before they are rolled out on a larger scale.

Regulatory sandboxes are used for DFI and digital payment services. The regulatory sandbox for DFI is administered under OJK, as stipulated in POJK No. 13/2018 (POJK 13). Bank Indonesia administers regulatory sandboxing for digital payment services, including providers that employ fintech for clearing, final settlement and payment realization operations.[6]

Not all sectors of the fintech industry operate using regulatory sandboxes. Online lending and equity crowdfunding services are tightly regulated under OJK Regulation (POJK) No. 6/2022 and POJK No. 37/2018.

As the experience with regulatory sandboxes grows, so does understanding of the approach.[7] However, the literature is still in its nascent stage and remains hampered by a predisposition either to examine the role of fintech in promoting financial inclusion or to investigate the regulatory loopholes of fintech lending in Indonesia (e.g., Hidajat, 2020; Tritto et al., 2021; Suleiman 2019). As a result, the way the regulatory sandbox operates in Indonesia, as well as its inherent risks, opportunities, and challenges have not been sufficiently studied. This study contributes to filling that gap by providing a comprehensive and thorough outlook of Indonesia's fintech regulatory sandbox, with a focus on the regulatory sandbox for DFI administered under OJK.

[6] As stipulated in Bank Indonesia Regulation No. 19/12/PBI/2017 on the Application of Financial Technology and Bank Indonesia Regulation No. 22/23/PBI/2020 on Payment System

[7] A study by Sugandi (2021), found that Indonesia's fintech industry was relatively resilient during the pandemic with e-money transaction value growing exponentially. Deloitte Indonesia (2021) investigated the interconnectivity and interoperability of QR-code-facilitated payments. PwC, United Overseas Bank (UOB), and Singapore Fintech Association (SFA) (2021) conducted a survey investigating the growing opportunities of the fintech industry in Indonesia and examined the industry's impact on digital financial inclusion and economic growth. Njuguna & Sowon (2021) examined the relationship between financial inclusion and credit scoring system in Indonesia.

THE REGULATORY SANDBOX AT A GLANCE

Fintech promotes financial inclusion and enables delivery of financial services at lower costs, but the industry faces challenges. The high cost of compliance with the preexisting regulatory landscape does not fit the peculiarities and novel business models of fintech and can act as a barrier to innovation (Alaassar 2021; IOSCO, 2017). In response, authorities in not only Indonesia but countries including Singapore, the United Kingdom (UK), and Australia have taken concrete steps toward regimes resembling a regulatory sandbox. Within the sandbox, participants are able to test new financial services, emerging technologies, or new business models with live customers, subject to certain safeguards and oversight (UNSGSA et al., 2019; Washington et al., 2022).

> "Properly-designed sandboxes generate benefits for regulators and innovators as well as for consumers."

Properly-designed sandboxes generate benefits for regulators and innovators as well as for consumers. Most notably, they help regulators gather first-hand evidence about emerging technologies and business models to develop regulatory frameworks, and they help innovators undertake time-bound testing of innovations under the regulator's supervision. Table 1 summarizes the potential benefits of sandboxes in general for each stakeholder.

Table 1.
Sandbox Potential Benefits – Overview

Regulator	Innovators	Consumers
• Inform long-term policy making through learning and experimentation • Signal commitment to innovation and learning • Promote communication and engagement with market participants • Update regulations that may prevent beneficial innovation	• Reduce time-to-market by streamlining the authorization process • Reduce regulatory uncertainty • Gather feedback on regulatory requirements and risks • Improve access to capital	• Promote introduction of new and potentially safer products • Increase access to financial products and services

Source: UNSGSA FinTech Working Group and CCAF (2019)

Box.1
Case Study

Regulatory sandboxes originally started out in the UK as a way to support and facilitate the growing fintech business. As part of the 2014 Project Innovate initiative, the UK's Financial Conduct Authority (FCA) launched its national fintech regulatory sandbox in 2015. Initially, the FCA sandbox scheme operates in a cohort-based manner, whereby firms—both authorized and unauthorized—can only apply during a specific application window for a duration of three to six months testing period. However, that approach switched to an "always-open" model in 2021, meaning that participating firms can now apply at any time.

Successful applicants have come from a variety of sectors which include digital identity solutions, open banking and application programming interface (API), and services aimed at facilitating greater access to finance. Over the years, the FCA has established seven cohorts in total and has received over 550 applications, ranging from innovation firms to well-established financial institutions such as Barclays, HSBC, Lloyds, and Nationwide (FCA, 2022).

Following the success of the FCA's sandbox, countries in the Asia-Pacific region, such as Singapore, have been quick to follow suit (McCarthy, 2021). The Monetary Authority of Singapore (MAS) acted promptly and established its own sandbox regime shortly after FCA launched its first sandbox cohort in the first half of 2016. Fintech sandbox in Singapore's MAS is open for both financial institutions and other businesses, and is comparable to the FCA's sandbox in many aspects. Both FCA and MAS provide additional options to their fintech sandbox, where FCA recently added Digital Sandbox and Green Fintech Challenge[8],whereas MAS offers Sandbox Express and Sandbox Plus[9].They both steer clear of a 'one-size-fits-all' sandbox and rather opt for a proportional approach that allows better understanding of specific risks emerging out of respective sectors in the financial system (Pei, 2018; Ahern, 2020; Baker McKenzie, 2020).

[8] See more on FCA website https://www.fca.org.uk/firms/innovation/green-fintech-challenge-and-digital-sandbox-which-service.
[9] See more on MAS website https://www.mas.gov.sg/development/fintech/regulatory-sandbox.

> Global interest in fintech regulatory sandboxes is growing, with sandboxes now operating in over 73 countries.

Global interest in fintech regulatory sandboxes is growing, with sandboxes now operating in over 73 countries. About 70% were initiated by emerging markets and developing economies in the East Asia and Pacific region (see World Bank 2020a). Some countries, including Indonesia as one of the early adopters in the region, create more than one fintech regulatory sandbox with varied objectives.

There are four categories of sandbox, based on their objectives, as highlighted in a World Bank report (2020b):

- policy-focused sandboxes aimed at evaluating particular regulations or policies;
- product or innovation-focused sandboxes that lower the cost for firms to enter the regulated marketplace and to test the market viability of new business models;
- thematic sandboxes focused that aim to accelerate adoption of a specific policy or innovation or of specific products aimed at particular segments of customer; and
- cross-border or multijurisdictional sandboxes, that enable firms' cross-border movement and operations while encouraging regulator cooperation and reducing arbitrage.

While the objectives of and mechanisms of sandboxes vary, these regulatory approaches are typically described as having components including requirements for selecting firms to participate, a trial period, options for the regulatory exemptions offered, and conditions for firms to exit the sandbox (Allen, 2019; Philipsen et al., 2021). The four models are often not sharply differentiated. Sandboxes also help regulatory bodies develop their regulatory frameworks in order to ensure consumer and investor protection, market integrity, financial inclusion, and fostering innovation and competition.

All categories of regulatory sandbox face compliance and legitimacy challenges. Compliance depends on a variety of incentives and motivations while legitimacy depends on the support for actions taken by the regulator (Nielsen & Parker 2012; Undheim et. al, 2022).

Johnson (2022) categorized four potential challenges in compliance and legitimacy which take shape across regulatory sandboxes. *Trust and accountability* can result in productive collaboration, but also carry a risk of undue influence by the regulated on the regulator. *Restricted enforcement discretion* allows leeway for firms to manage their own risk, but can discourage regulators from severe sanctions. *Participation and politics* refers to concerns about political favoritism and the resulting risk that resources will be spread too thin if too many firms are admitted to allay concerns about favoritism. Finally, *post-sandbox oversight and capacity* challenges compliance and legitimacy if risks to regulators or consumers only become clear after a firm exits the sandbox and scales up or if known issues are not resolved in the sandbox process.

Indonesia's rise as the biggest market in Southeast Asia has driven investors' appetite for digital financial innovation (DFI) services. To overcome barriers to innovation, the Indonesian government created a specific regulatory sandbox for DFI firms to test their products for a set period of time and to adapt their business models under the supervision of OJK. This aims to prevent instability in financial markets while enabling OJK to track financial product development.

> To overcome barriers to innovation, the Indonesian government created a specific regulatory sandbox for DFI firms to test their products for a set period of time and to adapt their business models under the supervision of OJK.

It remains to be seen whether Indonesia can realize the potential benefits of sandboxes with the OJK regulatory sandbox. In particular, the sandbox does not have a mandate to improve regulation based on its framework, and may be contributing to regulatory uncertainty for firms.

The following section discusses the regulatory landscape of DFI startups and joins ongoing conversations around risk management, compliance costs, and regulatory uncertainty. However, evaluating whether the regulatory sandbox has been a success is beyond the scope of this paper.

INDONESIAN DFI AND THE REGULATORY SANDBOX

In Indonesia, a wave of fintech startups has emerged to cater to a large population with limited access to financial services. The sectors containing these startups is referred to as digital financial innovation (DFI). DFI refers to any type of activity to revamp business processes, business models, and financial instruments that provide added value in the financial services sector and boost the digital ecosystem. As of October 2022, OJK classified DFIs into 15 clusters.[10]

Rather than competing with traditional financial service providers, DFI startups use lower-cost artificial intelligence (AI) and machine learning backed tools and products to drive financial sector innovation.[11] These innovations provide real-time solutions, such as enabling continuous access to services from anywhere, connecting formal and informal financial sectors, and improving potential for broadened credit access.[12]

Indonesia has taken a relatively progressive regulatory approach by introducing a regulatory sandbox for DFI. OJK, as the financial services regulator, issued Regulation No. 13/POJK.02/2018 on Digital Financial Innovation for Financial Services Sector (POJK 13), which came into force on August 16, 2018. POJK 13 is one of the most important regulations affecting Indonesia's fintech development. Prior to its introduction, OJK had never issued regulation governing the development of the fintech sector as a whole. Under this regulation, OJK categorizes all new digital-based financial activities beyond the already regulated industry into DFI and places them into a regulatory sandbox. POJK 13 also replicated the sandbox regime and pre-audit mechanism established by Bank Indonesia for fintech in the payments arena.[13]

One of the key drivers for developing the sandbox is the boom in online lending. In its early, unregulated development, online lending deployed unethical business practices including aggressive collection calls, predatory interest rates, and data privacy violations.[14] Abusive practices in online lending were accompanied by aggressive personal data collection and debt collection.

[10] Aggregator, Credit Scoring, Electronic Know Your Customer (E-KYC), Financing Agency, Financial Planner, Funding Agent, Insurance Hub, InsurTech, Online Distress Solution, Property Investment Management, RegTech-PEP, Reg-tech-eSign, Transaction Authentication, Tax and Accounting, and WealthTech. See the Appendix 1 for a complete list with descriptions.

[11] AI is the analysis of data to model some aspect of the world with computers, and models that learn from the data to respond intelligently to new data and adapt outputs accordingly. Machine learning (ML) is the set of techniques and tools that allow computers to "think" by creating mathematical algorithms based on accumulated data.

[12] For example, Aggregators, one of the types of DFIs classified by OJK, help entities in the digital financial services ecosystem to work together. They enable two services: Integration, where they connect payment instrument providers with entities that want to send money to or receive money from end customers and Value-Added-Services that include notification of successful payments, reconciliation, and receipts. Electronic Know Your Customer, another OJK category, assesses and verifies the identity of potential fintech customers and exercises due diligence and continuous transaction analysis. These client-onboarding processes are crucial for preventing money laundering and terrorism financing while constructing a sound digital ecosystem.

[13] Bank Indonesia developed its first sandbox framework focusing on the payment gateway fintech sector in 2017, which was then upgraded to Sandbox 2.0. Sandbox 2.0 consists of three core components: an innovation lab, an industrial sandbox, and a regulatory sandbox. Innovation Lab is engineered to allow start-ups and companies to test new payment innovation on a limited basis; Industrial Sandbox is designed for existing innovation which needs to be further propagated and promoted and Regulatory Sandbox is meant for stimulating innovation in payment policies or provision.

[14] In the second half of 2018, OJK recorded 404 illegal online companies employing aggressive debt collection practices (OJK, 2021).

It was in this context that a new wave of DFI fintech emerged to fill a gap in online lending, which covers peer-to-peer (P2P) lending and traditional consumer financing, which has moved towards digital channels (including the booming Buy Now Pay Later (BNPL) model).[15] Under the regulatory sandbox framework, DFI players can experiment with innovative financial products or services as long as they comply with certain regulations set by OJK.

Understanding the DFI regulatory sandbox framework

Key objectives of the POJK 13 are to promote a single mechanism to better communicate with OJK, to share information about testing more effectively, to improve the application process for firms, and ultimately to enable flexible adaptation to legislative solutions in the new and fast-changing digital economy while ensuring customer protection. To this end, in 2019, OJK issued three Circular Letters of the Financial Services Authority (SEOJK) regarding DFI based upon the mandate of POJK 13/2018, among others:

- SEOJK No. 20/SEOJK.02/2019 on the Recordation (*Pencatatan*) Mechanism for DFI
- SEOJK No. 21/SEOJK.02/2019 on Regulatory Sandbox
- SEOJK No. 22/SEOJK.02/2019 on Appointment of DFI Organizing Association

Before entering the sandbox, each DFI must submit an application for recording their innovation or business model as stipulated in SEOJK 20/2019. It is not a representative from the applicant company that presents the company's innovation or business model to the regulator, but rather an assigned person-in-charge (PIC) from OJK who makes the pitch on behalf of the company. The PIC is assumed to have gained understanding of the company's business model, challenges, and innovation based on documents submitted.

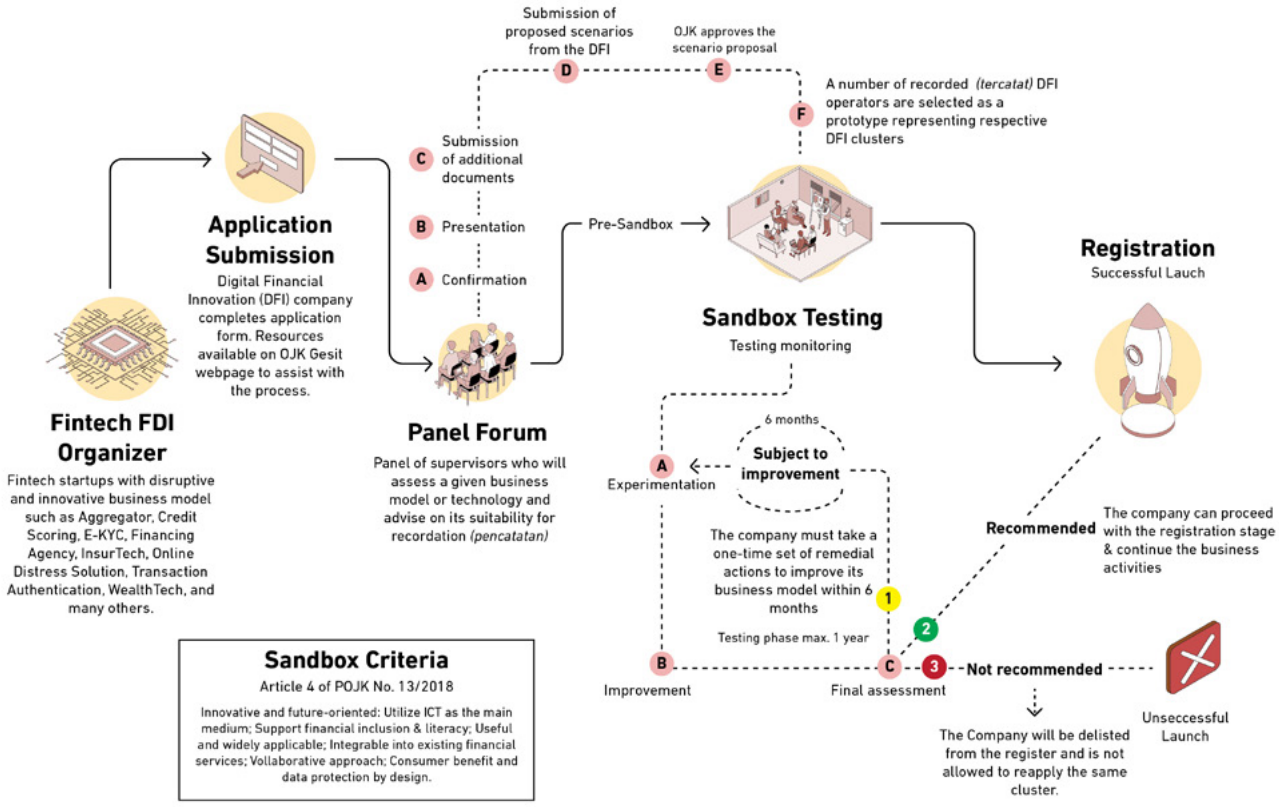
Before determining the status of the firm, OJK will verify the completeness and accuracy of documents submitted by the firm, as well as review the application through a Forum Panel. The latter consists of a panel of supervisors who will provide opinions whether a particular business model or technology is recommended, subject to improvement, or is not recommended for recordation.

In general, a DFI business model must meet certain criteria, as defined in POJK 13/2018 Article 4 and Article 7:

- innovative and forward-oriented;
- uses information and communication technology as the primary means of providing services to consumers in the financial services sector;
- support financial inclusion and literacy;
- useful and widely applicable;
- can be integrated into existing financial services;
- uses collaborative approaches; and
- pays attention to aspects of consumer protection as well as data protection.

[15] For example, credit scoring startups place analytics of potential credit-relevant data from nontraditional sources at the center of their business models. In this way, they offer a cost-effective solution which is expected to narrow down class divide and rural divide, serving borrowers who are traditionally underserved by banks or unbankable small and medium-sized enterprises. In turn, the credit score resulting from the AI-led assessment is reused by digital banks, other online lenders, or e-commerce (i.e., BNPL) under a business contract to assist decision-making.

Figure 1.
OJK Infinity Regulatory Sandbox Flowchart



Source: Compiled from POJK 13 and SEOJK 21, prepared by CIPS.

Once a DFI organizer has been recorded, OJK uses a prototyping mechanism to review and select recorded firms from each DFI cluster to act as a prototype for a review of similar business models. Prototypes are trialed in the regulatory sandbox for an initial period of up to one year with a single potential extension of six months.

As detailed by SEOJK 21/2019, the criteria for acting as a prototype in the DFI regulatory sandbox include:

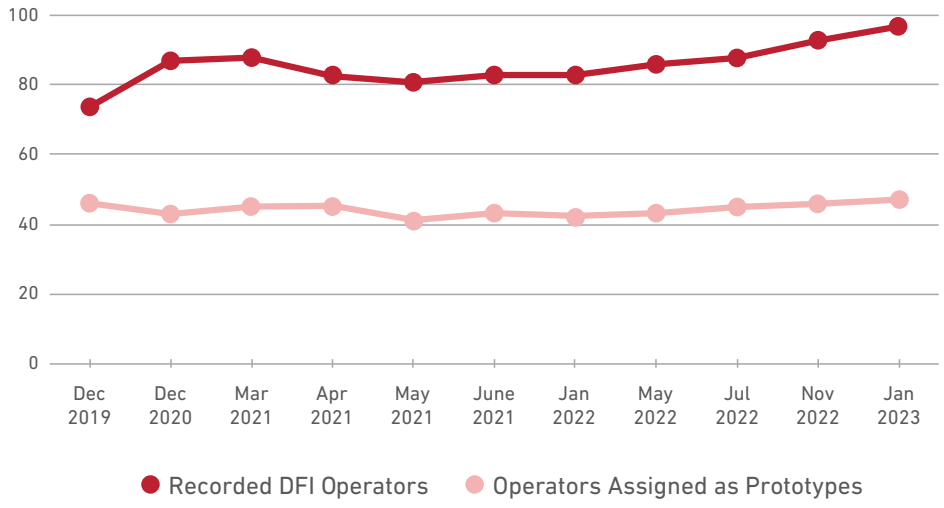
- Must be recorded as a DFI operator with OJK;
- Must have the most innovative business model of the organizations under consideration and must have a business scale with broad market coverage; and
- Must be registered with the fintech association (AFTECH).

More specifically, SEOJK 21/2019 defines key aspects of information technology and consumer protection, including data protection, that are considered during the trial period. The technical aspects assessed include:

- Implementation of periodic vulnerability assessment/penetration tests and implementation of recovery exercises.
- Requirement for a local Data Center and Data Recovery Center in Indonesia.[16]
- Personal data managed by the platform, level of data confidentiality, data and information security policies and organization.
- Access control and user access settings.
- Cyber incident event logbook.
- Business continuity management, business continuity plan, and data recovery plan.
- IT architecture and database structure.
- Other IT development plans.

During the trial period, OJK implements a series of ongoing assessments of the sandbox and the prototypes within it. Prototypes must disclose all important and relevant information for research and development purposes and for OJK assessment of the compliance of the prototypes, particularly in terms of data privacy requirements, future business plans, consumer dispute resolution, anti-money laundering, and consumer protection. This is in parallel with the provision in POJK 13 that the regulatory sandbox is "a testing mechanism established by the OJK to assess the reliability of the business processes and models, financial instruments and management processes of the firm".

Figure 2.
Number of DFI Operators Recorded in OJK's Regulatory Sandbox, December 2019 – January 2023



Source: OJK (2023a), compiled by CIPS

[16] Following the issuance of OJK Regulation No. 38 of 2020, some financial institutions are allowed to use data centers outside Indonesia if they have obtained prior approval from OJK. Yet, most DFIs are still operating on a smaller scale in which the data center is not yet a key infrastructure.

Based on the result of the regulatory sandbox, OJK will decide whether a firm is recommended, subject to improvement, or not recommended.

“Based on the result of the regulatory sandbox, OJK will decide whether a firm is recommended, subject to improvement, or not recommended.”

Table 2.
Potential Designations after Initial Trial Period

Recommended	Subject to Improvement	Not Recommended
The Company can proceed with the registration stage.	The Company must take remedial actions to improve its business model within six months.	The Company will be delisted from the register and is not allowed to reapply the same cluster.

Source: OJK (n.d)

Once a recommendation status has been issued, DFI providers are given six months to apply for registration with OJK. Failing to submit an application for registration by the deadline results in the revocation of recommended status and invalidation of recordation.

To complete the registration process, DFI providers must submit the registration application along with the supporting documents, including their deed of establishment, identity data, product description, and business plan, as outlined in Article 6 of POJK 13. Upon reviewing the application, OJK will approve it within 30 days and a certificate of registration will be issued to the DFI provider.

DFI providers deemed subject to improvement have six months to make adequate changes. If they fail to meet OJK's standards, the sandbox trial result will be altered to not recommended, meaning that participating firms will be removed from the register (*tercatat*) and unable to obtain a license to operate after exiting the sandbox.

Besides being subject to OJK supervision, a registered DFI provider is required to conduct self-assessment by recording the main risks (strategic, cyber, and liquidity) that relate to its business model. They must also formulate procedures and standards covering several aspects of DFI's operation, such as business strategy, consumer protection, IT operations, information security, and disaster recovery plan. Additionally, as stipulated in Article 22 of POJK 13, DFI supervision encompasses risk-based and technology supervision as well as market discipline, which includes (but is not limited to) balancing prudential aspects and innovation support, collaborating with authorities and institutions, prioritizing good governance and risk management, adhering to professional standards and market conduct, ensuring data and transaction security, and complying with regulatory requirements.

Moreover, DFI providers must deploy special regulatory technology (RegTech) units within the DFI provider to increase OJK monitoring efficiency and compliance. DFI Providers must also locate their data centers and disaster recovery centers within Indonesia. Throughout the trial and experimentation, OJK also applies existing regulations, as shown below, adapting them to the specific regulatory needs of fintech.

Table 3.
List of Identified Regulations Complementary to OJK's Regulatory Sandbox Implementation

Regulation	Description
OJK Regulation No. 6/ POJK.07/2022 on Consumer and Public Protection in the Financial Services Sector **(POJK 6/2022)**	This OJK regulation (POJK) voids the previous POJK concerning consumer protection in financial services to strengthen consumer safeguards in the dynamic financial industry. Among the main provisions of this new regulation are disclosure and transparency obligations for financial service providers, dispute resolution, and data and consumer protection. Under this POJK, consent from data subjects is compulsory for consumer data sharing between financial service providers.
OJK Regulation No. 23/ POJK.01/2019 on Amendment to the OJK Regulation No. 12/ POJK.01/2017 on Implementation of Anti-Money Laundering and Prevention of Terrorism Financing Programs in the Financial Services Sector **(POJK 23/2019)**	This regulation establishes the requirements and procedures for financial services providers to implement anti-money laundering, prevention against the proliferation of weapons of mass destruction, and counter-terrorism financing programs, including customer due diligence, record-keeping, and reporting suspicious transactions. In general, POJK 23/2019 does not change significantly from the principles of its predecessor, POJK 12/2017, but rather provides clarification on several provisions and additional requirements to the existing provisions.
Law No. 27/2022 on Personal Data Protection **(PDP Law)**	As the first legal umbrella for personal data protection in Indonesia, this law stipulates the rights of data subjects as well as the liability and obligations of data controllers and processors. It classifies personal data into several types, including but not limited to personal financial data.
Law No. 4/2023 on Development and Strengthening of the Financial Sector **(Law on Finance** or **UU P2SK)**	The newly passed Law on Finance serves as an omnibus law that aims to streamline and harmonize all financial sector regulations. With regard to the provisions of fintech-based services, the law formalizes and strengthens the authority of OJK in regulating and monitoring financial activities related to Financial Sector Technology Innovation (*Inovasi Teknologi Sektor Keuangan*, or ITSK), a new term that replaces DFI and is used to categorize fintech-based services. The governance and mechanism for fintech regulatory sandboxes are still regulated under OJK's authority. Additional provisions on the sandbox stipulate that the sandbox final results can be used not only for determining the sandbox participants' fitness to proceed to business license application but also as a further consideration in formulating new regulations.
OJK Regulation No. 13/ POJK.02/2018 on Digital Financial Innovation in the Financial Services Sector **(POJK 13/2018)**	This POJK covers the legal basis for OJK to regulate DFI in the financial services sector and to identify DFI clusters, including aggregators, innovative credit scorings (ICS), Electronic Know Your Customers (E-KYCs), digital wallets, payment systems, and other financial services outside the payment system. Under this regulation, the regulatory sandbox is set to be the testing mechanism for OJK to assess the reliability of recorded DFI providers before granting them formal business licenses.

OJK Circular Letter No. 22/ SEOJK.02/2019 on Appointment of an Association for Digital Financial Innovations Provider **(SEOJK 22/2019)**	As an implementing regulation to Article 21 of POJK 13/2018, SEOJK 22/2019 designates an association for DFI providers, with the Indonesia Fintech Association (AFTECH) appointed by the OJK as the sole official association for DFI providers in Indonesia. DFI providers are required to become members of AFTECH in order to receive certain benefits, to comply with AFTECH's standards and codes of conduct, and to participate in self-regulatory initiatives.
OJK Circular Letter No. 20 / SEOJK.02/2019 on Recordation Mechanism for Digital Financial Innovation Providers **(SEOJK 20/2019)**	SEOJK 20/2019 establishes the procedures and requirements for DFI providers to be recorded in the OJK's registry. It provides a comprehensive explanation of DFI's recordation process, from submission to approval or revocation. DFI providers must be recorded in order to participate in OJK's sandbox. OJK employs a Forum Panel to verify, assess, and determine the status of the participating firm. Recorded DFIs must submit a quarterly self-assessment performance report to the OJK.

Source: compiled by the author from OJK official documents

To scale up the evidence-based regulatory environment, OJK established a fintech center called the Innovation Centre for Digital Technology (OJK Infinity[17]) in August 2018. This research center serves as a platform where fintech firms, regulators, experts, and academics collaborate to discuss industry trends, conduct research, and gain skills. It aims to build centralized knowledge center for fintech and a more friendly fintech ecosystem in Indonesia that can align Bank Indonesia and OJK regulations on fintech.

Co-regulation spaces

One of notable developments in the regulatory sandbox is the appointment of AFTECH as a self-regulatory organization for DFI, as mandated by the circulatory letter SEOJK No. 22/2019. AFTECH membership is mandatory for DFI organizers, and this requirement gives AFTECH capacity to develop self-regulatory instruments, monitor compliance, and to carry out enforcement. AFTECH works closely with OJK to develop codes of conduct and to enhance the customer protection framework, including but not limited to redress mechanisms and access to information.

"One of notable developments in the regulatory sandbox is the appointment of AFTECH as a self-regulatory organization for DFI."

At the time of writing, AFTECH has laid important groundwork for compliance mainly through a series of Codes of Ethics[18]:

- Code of Ethics on Personal Data Protection and Data Confidentiality in the Financial Technology Sector;
- Code of Ethics for Digital Finance Innovation;
- Code of Ethics for Innovative Credit Scoring; and
- Code of Ethics for Aggregators.

[17] OJK Infinity focuses on several fronts, among others: education centers, digital financial industry ecosystem development, fintech incubation, and information sources. There is also a consultant team assigned to OJK Infinity, for whom potential startup firms can approach and consult regarding business models prior to recordation.
[18] See Appendix 2 for details of the Code of Ethics for Digital Financial Innovation and the Code of Ethics on Personal Data Protection.

Other co-regulatory roles for AFTECH

Apart from enforcing compliance, AFTECH assists OJK in the pre-registration process for DFI operators. Before an operator submits an application to OJK, AFTECH conducts membership pre-screening and provides information about risk management and business model.

AFTECH also plays an instrumental role during the post-recording process, during which the association helps OJK with its market conduct monitoring based on codes of ethics or codes of conduct. Under the shared responsibilities of OJK and AFTECH in ensuring compliance in DFI,[19] AFTECH is required to submit:

- Annual strategic working plan;
- A quarterly performance report;
- A quarterly monitoring report that covers members mapping, compliance with codes of conduct and codes of ethics, and business models that are considered risky;
- Annual operational working plan;
- Reports of violations of codes of ethics and codes of conduct and associated sanctions;
- Reports of acceptance to new membership and/or revocation of membership, within seven working days after accepting new membership and/or revoking members; and
- Reports of operational activities implementation.

The law on finance, the personal data protection law, and the regulatory sandbox

Law No. 4/2023 (Law on Finance or UU P2SK) on the Development and Strengthening of the Financial Sector is an omnibus law that aims to streamline and harmonize all financial sector regulations. With regard to the provisions of fintech-based services, the law formalizes and strengthens the authority of OJK in regulating and monitoring financial activities related to financial sector technology innovation (ITSK), which covers DFIs[20] and other non-banking sectors.[21]

This law has important implications for the regulation of fintech-based services and regulatory sandboxes. This law grants OJK more authority to oversee financial activities and stipulates that the outcomes of the regulatory sandbox should be used not just to determine which innovations are viable but also to improve regulation. It is expected to provide a legal basis for fintech regulatory sandboxes that fall under the ambit of OJK, and formalize how results from the sandbox are used when formulating new regulations.

[19] As stipulated in SEOJK 22/2019.
[20] See again Appendix 1.
[21] Including capital markets, banking, pension funds, insurance, crypto transactions, and cooperatives.

Because this is a new law still in its implementation period, it remains unclear whether its derivative regulations will improve clarity about the process for exiting the sandbox and obtaining a license from OJK.

OJK is performing an internal reorganization to strengthen its supervisory function in the financial services industry[22] and while this is ongoing the regulator is expected to add 53 strengthening regulations. It also remains unclear whether implementing regulations related to the sandbox exit plan and licensing would be issued.

A pending but important component of data protection is the appointment of an Indonesian Data Protection Authority. The Personal Data Protection Law (PDP Law) regulates administrative sanctions and provides enforcement powers to a Data Protection Authority. However, the focus of this regulatory regime remains limited to enforcing the privacy promises that businesses make to users, rather than standards set by relevant authorities.[23]

> The Law on Finance added confusion to data protection governance. The Law on Finance has a different number of sanctions imposed by the PDP Law, and notably specifies new sanctions for various financial services.

The Law on Finance added confusion to data protection governance. The Law on Finance has a different number of sanctions imposed by the PDP Law, and notably specifies new sanctions for various financial services. The Law on Finance contains nine types of sanctions up to and including license termination, whereas the PDP Law lists only four levels of sanctions, with administrative fines being the most severe. These sanctions are outlined in Table 4.

Table 4.
Sanctions under PDP Law and Law on Finance

PDP Law	Law on Finance
• Written warning • Temporary termination of personal data processing • Deletion of personal data • Administrative fine	• Written warning • Reduction of soundness rating • Temporary termination of activities • Administrative fine • Termination of agreement • Termination of registration • Termination of officials • Inclusion of officials on blacklist • Termination of permit

Source: Compiled from official documents of the PDP Law Article 57(2) and Law on Finance (P2SK) Article 284(2)

The enforcement of these laws can be confusing, as there is poor coordination among authorities and different administrative sanctions. It also remains unclear to what extent the Law on Finance applies to DFI operators in their capacities as personal data processors and/or controllers.

[22] In February 2023, OJK added department units to supervise the stock market industry and the non-bank financial industry. It also established a department for monitoring banking conglomerates as mandated by the Law (OJK, 2023c). OJK has also upgraded its DFI department (Digital Finance Innovation Group) in charge of recordation and regulatory sandbox to the Directorate of Digital Finance Innovation (Anggraeni, 2023).
[23] OJK, the Ministry of Information and Communications, National Consumer Protection Agency, and the Indonesian National Police, which must coordinate to set these standards.

CHALLENGES FACING THE REGULATORY SANDBOX MODEL

OJK faces challenges in gathering the necessary information to ensure well-informed policy decisions and to improve its supervision capability, specifically affecting the legitimacy of the regulator and the firms it regulates and compliance with OJK regulation.

There is no accepted best model for the sandbox. In fact, it is widely argued that no single approach can address the problems of the ever-evolving fintech industry. The regulatory sandbox applied by OJK mimics and combines models used in other countries.[24] The goal is not to identify and follow known best practices, but to discover the model that best fits Indonesia's needs. This is why the sandbox approach varies.

> There is no accepted best model for the sandbox.

The variation of the approach affects the legitimacy of both the regulator and the entities it regulates. OJK's legitimacy depends on the actions it takes to ensure that the regulatory sandbox can improve risk mitigation and financial inclusion in a country where a large segment of the population are unbanked or underbanked.[25] Businesses regulated through the sandbox experience improved legitimacy and risk management capability if the sandbox framework provides meaningful information about their viability and safety for consumers.

The ultimate output of the sandbox is not only the formal authorization of the tested products and services, but also an exit procedure that includes a formal clarification of or an adjustment to the existing regulatory requirements.

There are three challenges to meeting these objectives: an uneven playing field, lack of clarity, and insufficient resources.

> There are three challenges to meeting these objectives: an uneven playing field, lack of clarity, and insufficient resources.

[24] Such as Singapore and Hong Kong.
[25] The OJK sandbox tests innovative credit scoring programs, highlighting the importance of the use of alternative data and machine learning in measuring creditworthiness of thin-file customers. As of January 2023, 20 operators were allowed to test their products with fintech lending and digital banks (OJK 2023a).

Uneven playing field

Policymakers emphasize the perceived power of the regulatory sandbox to encourage innovation so strongly that it implies that no other regulatory tool can support new technologies or business models. But while there is general agreement that the sandbox can free innovative companies from the fetters of rigid regulation, a more contested question is whether the regulatory sandbox can create a level playing field that gives small, innovative firms a chance against large competitors.

> A more contested question is whether the regulatory sandbox can create a level playing field that gives small, innovative firms a chance against large competitors.

The OJK DFI sandbox takes an "entity-based" approach in which the tests applied during participation in the sandbox depend on the type of innovation being tested. This differs from Bank Indonesia's risk-based regulatory sandbox, which applies a single set of standards covering governance, risk management, interoperability and interconnection, and information system security standards (PwC, 2021). Neither model is superior, but each has its own strengths and setbacks. Some DFI operators attribute the ability to access markets to their participation in the sandbox, but evidence is mixed. It is interesting to note, however, that according to some respondents, the absence of technology standards that would have otherwise served as a baseline for companies to compete on a fair basis, has resulted in an unlevel playing field between companies in the sandbox and those outside.

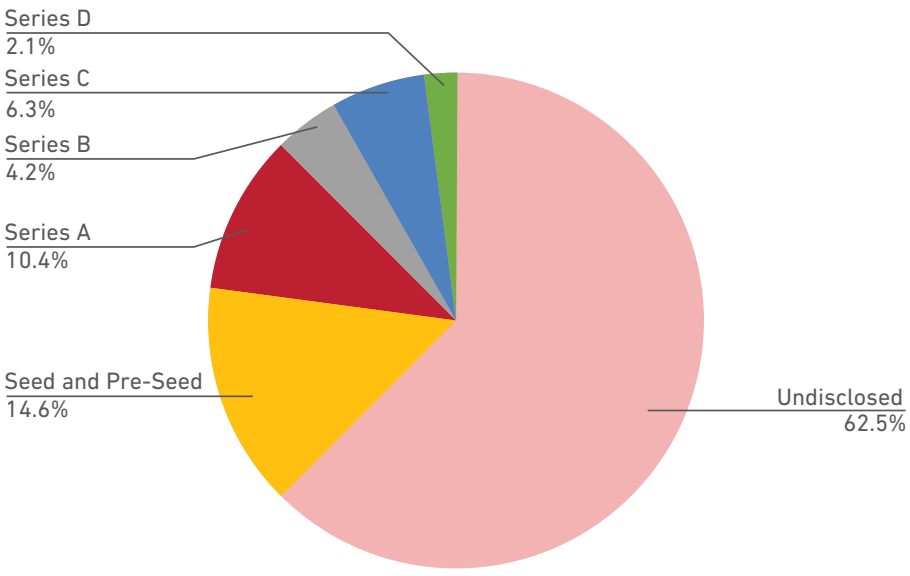
A case in point is increasing competition from non-DFI as well as the entry of larger players into similar business models run by DFI operators. For some DFI offerings in the market, there are now at least large business entities and established non-financial services tech firms competing in the same space. One of our respondents, operating an aggregator business providing mortgage solutions, lamented how property conglomerates have increasingly been looking to provide fintech solutions as well - acting as "digital brokers". Those larger firms have a clear advantage because of their established ecosystems, user bases, and greater financial resources at their disposal. This allows the larger firms to innovate without participation in the sandbox and therefore free of sandbox rules and oversight. These loopholes yield them more latitude to adapt with changing customer needs and to reduce compliance risks. While OJK has attempted to address this issue by increasing transparency in their operations and calling for inputs, this flip side of sandbox remains challenging as the solution rather requires synchronization on cross-ministerial and institutional programs that sandbox is not able to offer.

Likewise, as competition intensifies, sandbox participants must boost their competitive edge by fortifying their unique value proposition to established companies, hence requiring stable access to capital. Commonly, there is a tacit understanding among policymakers that the sandbox could have a positive influence on participants' ability to access capital, as regulatory costs are reduced (Interviewee 5, 2023). However, participants have actually reported mixed results when assessing if the sandbox is a contributing factor that enabled them to attract funding sources. According to some interviewees, many more fintechs have been largely supported by their own internal networks than the sandbox. As an insider mentioned in an interview:

> "The regulatory sandbox might provide participants a quality seal, making them more attractive to investors and venture capitals. Yet, it is not always the case. In reality, the majority of fintech startups secure funding due to two reasons. First, they develop products and services that are outside the scope of financial regulators, thus reducing transaction cost. Second and the most widely found in the case of Indonesia is that a founding member or CEO's characteristics that positively influence investment decisions and stand out from competitors in a tightened funding environment. His/her international experiences and background attract support from external funds, readily resolving information asymmetry between new startups and potential investors." (Interviewee 5, 2023).

This is also supported by our data analysis on 105 DFI Operators recorded by OJK as of April 2023. With the data from TechinAsia, Crunch base, Pitchbook, and a third-party information website for the Indonesian fintech industry on 48 sample DFI Operators; we found that there is a considerable gap between companies in terms of funding. DFI firms securing at least series B funding make up only 12.5% of the sample. Two operators are recorded to be in series B series funding stage, while three operators are currently in series C and only 1 operator managed to secure series D. Meanwhile, 62.5% of DFI operators do not disclose information regarding their funding stage.

Figure 3.
Proportion of Sample DFI Operators Based on Funding Stage



Source: Compiled from various sources, notably TechinAsia, Crunch base, Pitchbook.

Apart from the funding issue, another problem arising from the regulatory sandbox is the implementation of additional safeguards which rather expand smaller firms' vulnerability. While the regulatory sandbox has indeed allowed participants to benefit from "lighter" regulatory approval, it does not mean that it is not equipped with appropriate safeguards to mitigate the risks associated with the application of technologies. It is without no doubt that these safeguards are fundamental to ensure a safe and sound digital ecosystem. However, very often, what counts as risk and how risks should be managed may vary among DFI players. In addition, not all the conditions or same terms can be imposed across all business entities even though the use case for prototypes may be similar or even identical. For example, OJK requires all firms in the sandbox to get ISO 27001 certification to mitigate against information security risk. However, ISO can be a prohibitively expensive certification scheme for new and small firms, and its standards are not nimble enough to accommodate the new technologies and business models employed by the firms that qualify for the DFI sandbox. A uniform minimum standard for the outcomes that could be affected by information security risk would effectively apply more evenly to small and large businesses than entity-based rules that try to accommodate the differences between different DFI operators. Whether ISO 27001 should be a mandatory requirement or not, is not a moot point or key focus of the paper. Yet, this is just one of examples that reflect an uneven level of playing field within the sandbox, in which some requirements and policy decisions have varying impacts on prototype vs non-prototype and big companies vs smaller companies.

For latecomers and small companies, they are often discouraged from sharing critical information, such as best practices, new technology in responding to customer's needs and complaints and new business plans, to the regulator. This is not because they try to curb certain enforcement of rules. There is a perception that the sandbox favors operators designated as prototypes over the other firms. Because prototypes are taken as the case from which the regulator establishes its understanding of a new technology, the prototype firm's interaction with OJK can, purposefully or unwittingly, shape the regulator's risk perception in ways that disadvantage other firms not participating as prototypes. This creates a perception that the regulator is not interested in the input or success of firms that don't act as prototypes, and other operators feel discouraged from providing their own input to OJK. There is also fear that if a firm provided sensitive information to the regulator, that information would be passed along by OJK to the prototype in the interest of improving experimentation, potentially eliminating the advantage that the non-prototype firm might have enjoyed if they had withheld the information.

Lack of clarity

Lack of clarity in the regulatory sandbox process affect both the outcomes expected from the sandbox and the exit mechanism by which operators leave the sandbox.

"Lack of clarity in the regulatory sandbox process affect both the outcomes expected from the sandbox and the exit mechanism by which operators leave the sandbox."

A regulatory sandbox typically takes an outcome-oriented approach to regulation, meaning that the regulator measures success based on achievement of relevant outcomes, rather than the processes through which those outcomes are pursued. An outcome-oriented approach allows sandbox participants to plan strategies to comply with the regulation appropriate to their business model and available resources, reducing compliance costs. However, while in the sandbox there are no benchmarks or clearly predefined performance goals. How firms exit the sandbox, how they obtain licensing, and what licensing constitutes also all remain unclear.

The lack of clear desired outcomes makes regulatory uncertainty a problem for DFI operators, which may be removed by OJK without sufficient explanation of what rule the operator has broken. The regulator's fear that it will be perceived as subject to industry capture because the sandbox is already so fintech-friendly discourages it from being more open with the firms it regulates. However, better communication of expected outcomes and standards is not the same as allowing firms to dictate those standards and outcomes, and would improve understanding of regulatory expectations and therefore compliance.

For some operators, transparency in the licensing and application process after exiting the sandbox is more important than issuing new regulations or amending existing regulations. The parameters for exit from the regulatory sandbox after the trial period are not well-defined. POJK 13/2018 only states actions need to be taken when the sandbox firm fails during the trial or is required to improve. Yet, it does not elaborate an exit plan that contains explicit arrangements for ensuring that: (1) there is tailored authorisation of the entity; (2) post-sandbox engagement with participants to evaluate the actual impact on financial markets and; (3) provisions in case the service is discontinued after exit.

For example, in the current scenario, those DFI operators whose business models passed the test, are still listed as "recorded" (*tercatat*). There is no specific exit plan from OJK whether there would be business full authorization if not new regulations that would later affect their playing field. On the one hand, the transparency issue of the licensing process potentially impacts the legitimacy of OJK especially in terms of its capacity in providing adequate framework for a review of the operation and outcomes of the sandbox. As one of our interviewees from the private sector argued:

> "Among DFI clusters, aggregators and innovative credit scoring companies are actually mature enough to enter the market. But, the fact that a number of companies are still burning the cash and even forced to sell themselves as they run out of funding, might affect the assessment of OJK towards the feasibility of the business model, resulting in reluctance to reassess licensing processes." (Interviewee 4, 2023)

The lack of transparency may create a perception that the regulator is not interested in whether its outputs actually improve the regulatory environment for fintech in Indonesia. Regulatory uncertainty in exit from the sandbox also affects the legitimacy of DFI operators in the eyes of investors, partners, and customers, because it's not clear what exiting the process proves about the firm.

Another example is the restriction of using ads in Google. Google policies prohibit companies that are not licensed from creating or using a Google Ads account. As with the case of POJK 10/2022, DFI firms are not licensed after being recorded and must still go through a lengthy process to get a confirmation letter from OJK (Interviewee 6, 2023).

Although a cautious approach to developing a sound and credible exit policy has merits, the debate around licensing issues has undermined that desired credibility. POJK 10/2022 again provides an example—while P2P was originally under-regulated, it is tightly regulated under this regulation, in ways that once again might hamper innovation. POJK 10/2022 requires that companies have at least IDR 25 billion (approximately US$1.7 million) in issued capital, an increase from IDR 1 billion during the registration period. POJK 10/2022 also requires companies to apply to the OJK for a license, which is in addition to an Electronic System Provider Certificate also issued by the OJK (Nisaputra, 2022). For DFI participants, the complicated licensing process of P2P fintech and equity requirements can be part of the exit framework. However, only large and established companies can comply with the capital requirements (Interviewee 3, 2023). It remains unclear whether the new licensing process in the post-sandbox period will add more regulatory burden on firms looking to scale. This could have raised a number of policy questions about whether or not the post-sandbox programs would redefine winner and loser within DFIs.

Insufficient resources

Productive collaboration between regulators and sandbox participants is an essential component of the regulatory sandbox. Participants in the OJK sandbox use a structured dialogue called a Forum Panel to disclose information and approach OJK with challenges. OJK is expected to respond in a timely, helpful, and transparent manner. However, this process suffers from a lack of resources and expertise.

For example, in some cases a lack of staff with technical expertise affects prototype selection process. This can be traced back to the recordation stage, at which a representative appointed by OJK is responsible for making the company's pitch. In practice, these representatives are responsible for the applications of many companies and consequently often do not perform an adequate risk assessment, and may even result in the company being recorded under a cluster inappropriate for its business model. Put simply, asymmetric information and misinterpretation can result in the company being recorded under a cluster that is completely different from its real business model. As an aggregator company representative shared with us in an interview:

> "There was a big company whose business model does not really resemble an aggregator, but being listed as an aggregator. Later, it was selected as a prototype. This risk should be particularly emphasized, as mismatch between business models and assessment criteria would potentially affect learning outcomes and experimentation throughout the sandbox mechanism." (Interviewee 2, 2023)

Limited human resources also creates barriers to adoption of specific innovation or supporting technology to business models, especially when firms need to provide real-time updates on their business development and to gather regulatory input. In general, stakeholders whom we talked with have shown positivity towards frequency contact being made through the sandbox.

"Limited human resources also creates barriers to adoption of specific innovation or supporting technology to business models."

> "We actually met on a regular basis with them, where we presented progress on how testing was going on, demonstrated to what extent our products and services enabled financial inclusions and met certain parameters, and what kind of challenges we have been faced with. However, there were a series of moments when we kept meeting with different people on the regulator side, which resulted in incomplete information at the end. Likewise, there is a bit of an expectation gap and sometimes it takes a bit longer to get them across the line and provide real-time feedback regarding some technological updates that might result in some changes in our business model." (Interviewee 4, 2023)

Inherently, the sandbox is a good value for participants to do some sort of testing and for the regulator to provide inputs on such commercial solutions as technological updates that would work. Key lessons learned from this is that regulatory sandboxes need huge investment in human resources and need OJK to allocate more resources. Having no sufficient resources may risk regulators to engage with participants in incomplete information and may increase the cost of regulatory compliance.

POLICY RECOMMENDATIONS

The DFI regulatory sandbox creates a safe testing environment in which the regulator and operators are able to experiment with technology and new business models without necessarily compromising consumer safeguards. From the perspective of the regulator, the sandbox also provides an opportunity to design evidence-based policy that suits new business models based on the regulatory, economic, and technical assessment that has taken place during the experimentation process. Companies benefit from some waivers or exemption from rules that might otherwise impose a considerable regulatory burden.

However, sandboxes are not a panacea. The regulatory sandbox should be assessed based on:

- Ultimate outcomes for the firms that participated; and
- Whether innovation tests can be incorporated into a formal clarification of or an adjustment to the existing regulatory requirements.

Despite positive developments, doubts remain about whether the sandbox actually identifies technology and business models that can compete outside the sandbox and are therefore in need of regulation. This calls into question use of the sandbox both to OJK and to the firms that go through in the framework.

Regulatory and governance improvements are essential to ensure the effective implementation of the sandbox. These changes would help OJK devise a more coherent, context-specific, and enduring regulatory sandbox ecosystem.

Our recommendations for future improvement are as follows:

Clarify the goals of the sandbox framework

The Law on Finance (UU P2SK) should be used to provide a clear mandate for OJK to license DFI providers and provide clear parameters for assessing and overseeing innovative business models and technology. The Law on Finance and its supporting regulations should also make clear the process for exiting the sandbox, the desired outcomes of the licensing process, and how the sandbox framework should contribute to iterative improvements of the DFI regulatory environment.

Ensure regulatory coordination during the trial process

Interactions between OJK and firms through the sandbox to some extent reduce regulatory uncertainty and signal a pro-innovation stance. However, as explained in the previous section, while regular engagement with the regulator is important, interagency regulatory coordination is not less important to improve functioning of the regulatory sandbox and provide powerful support to OJK. This is especially incremental when it comes to data protection mechanisms. Notwithstanding existing OJK regulations and code of ethics from AFTECH, a legal backing to

enable the arrangements to be enforced along with a better regulatory clarity of how the existing regulatory tools as well as the enactment of UU P2SK would fit with the new data protection bill must be prioritized.

One of pending yet important components of data protection that still required regulatory clarity include the appointment of Indonesian Data Protection Authority (DPA). Personal Data Protection Law regulates administrative sanction and provides some enforcement powers for the DPA to deter non-compliant behavior. Yet, the focus of the new regulatory regime is still limited to enforcing the privacy promises that businesses make to users, rather than on what relevant authorities—OJK, the Ministry of Information and Communications, National Consumer Protection Agency, and the Indonesian National Police—can prepare and coordinate each other.

It has been widely assumed that such a fintech-friendly jurisdiction as the regulatory sandbox may create tradeoff between regulatory leniency and consumer protection. Better interagency regulatory coordination and clear-cut obligations would strengthen regulatory objectives of sandbox, help mitigate potential impacts, and ultimately boost the legitimacy of OJK

Extending co-regulation

The co-regulatory approach between OJK and AFTECH must be extended to allow for further improvement of the sandbox, its processes, and its outcomes and to strike a balance between regulatory and commercial interests. In particular, AFTECH input should extend to:

- Collaboration with regulators and relevant ministries to set requirements for data protection officers;
- Ex-ante consultation with regulators to assess risks and set up technical measures for different clusters in DFI as well as in providing inputs regarding sandbox exit mechanism; and
- Evaluation of the outcomes of the sandbox to ensure they apply to both prototypes and non-prototypes even though the use case may be similar or even identical.

Allocate sufficient resources for sandbox administration

As AI, machine learning, and other emerging technology are continuously being adopted in the fintech sector, it is widely acknowledged that no single approach can solve the intricate challenges posed by the ever-evolving industry. Executive leadership, appropriate staffing, and institutional support are pivotal to enhance OJK's supervisory function. Additionally, allocating adequate resources to OJK's technical expertise—particularly sandbox committees as well as sandbox PICs—can help OJK better comprehend the latest technological advancements and devise a more coherent, context-specific, and enduring regulatory sandbox ecosystem. In turn, obtaining clear support from figures of authority would also encourage alignment among stakeholders while sandbox participants can also communicate purpose and goals across internal divisions effectively.

REFERENCES

Ahern, D. M. (2020, March). Regulators nurturing fintech innovation: Global evolution of the regulatory sandbox as opportunity based regulation. European Banking Institute Working Paper Series, 60, 1-26. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3552015

Alaassar, A., Mention, A.-L., & Aas, T. H. (2021, May). Exploring a new incubation model for FinTechs: Regulatory sandboxes. Technovation, 103, 1-14. https://doi.org/10.1016/j.technovation.2021.102237

Allen, H. J. (2019). Regulatory Sandboxes. George Washington Law Review, 87, 579-645. http://dx.doi.org/10.2139/ssrn.3056993

Anggraeni, R. (2023, February). Profil karir 16 kepala departemen dan deputi komisioner OJK yang baru dilantik hari ini. Finansial. https://finansial.bisnis.com/read/20230201/215/1623774/profil-karir-16-kepala-departemen-dan-deputi-komisioner-ojk-yang-baru-dilantik-hari-ini-12

Asosiasi Fintech Indonesia, Asosiasi Fintech Pendanaan Bersama Indonesia, & Asosiasi Fintech Syariah Indonesia. (2019, September). Pedoman perilaku penyelenggara teknologi finansial di sektor jasa keuangan yang bertanggung jawab. AFTECH. https://fintech.id/storage/files/shares/Kode%20Etik/Joint%20CoC%20-%20AFTECH%20AFSI%20AFPI%20[PUBLIC].pdf

Asosiasi Penyelenggara Jasa Internet Indonesia. (2022, June). Profil internet Indonesia 2022. Asosiasi Penyelenggara Jasa Internet Indonesia. https://apjii.or.id/survei/surveiprofilinternetindonesia2022-21072047

Badan Pusat Statistik. (2022). Jumlah penduduk menurut kelompok umur dan jenis kelamin, 2022. Badan Pusat Statistik. https://www.bps.go.id/indikator/indikator/view_data_pub/0000/api_pub/YW40a21pdTU1cnJxOGt6dm43ZEdoZz09/da_03/1

Baijal, A., Hoppe, F., Chang, W., Davis, S., & Hoong, F. W. (2022, October). e-Conomy SEA 2022. Bain & Company. https://www.bain.com/insights/e-conomy-sea-2022/

Baker McKenzie. (2020, May). A guide to regulatory fintech sandboxes internationally. Baker McKenzie. https:// https://www.bakermckenzie.com/-/media/files/insight/publications/2020/05/a_guide_to_regulatory_fintech_sandboxes_internationally_8734.pdf?la=en

Beaumier, G., Kalomeni, K., Campbell-Verduyn, M., Lenglet, M., Natile, S., Papin, M., Rodima-Taylor, D., Silve, A., & Zhang, F. (2020, May). Global regulations for a digital economy: between new and old challenges. Global Policy, 1-8. https://doi.org/10.1111/1758-5899.12823

Deloitte Indonesia. (2021, January). Taking stock of the COVID-19 pandemic in Indonesia. Deloitte Indonesia Business and Industry Updates. https://www2.deloitte.com/content/dam/Deloitte/id/Documents/about-deloitte/id-about-deloitte-taking-stock-covid19.pdf

Financial Conduct Authority (FCA). (2021, September). Green fintech challenge and digital sandbox: which service to apply for. Financial Conduct Authority. https://www.fca.org.uk/firms/innovation/green-fintech-challenge-and-digital-sandbox-which-service

Financial Conduct Authority (FCA). (2023, March). Regulatory sandbox accepted firms. Financial Conduct Authority. https://www.fca.org.uk/firms/innovation/regulatory-sandbox/accepted-firms

FinTech Working Group of the United Nations Secretary-General's Special Advocate for Inclusive Finance for Development (UNSGSA), Cambridge Centre for Alternative Finance (CCAF), & Monetary Authority of Singapore (MAS). (2019). Early lessons on regulatory innovations to enable inclusive fintech: Innovation offices, regulatory sandboxes, and regtech. UNSGSA Report. https://www.unsgsa.org/sites/default/files/resources-files/2020-09/UNSGSA_Report_2019_Final-compressed.pdf

Heeks, R., & Bukht, R. (2020, March). Digital economy policy in developing countries. SSRN, (Paper No. 6), 1-31. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3540027

Hidajat, T. (n.d.). Unethical practices peer-to-peer lending in Indonesia. Journal of Financial Crime, 27(1), 274-282. https://doi.org/10.1108/JFC-02-2019-0028

Indonesia Economic Prospects (IEP), June 2022: Financial Deepening for Stronger Growth and Sustainable Recovery. (2022, June). The World Bank. https://www.worldbank.org/en/country/indonesia/publication/indonesia-economic-prospects-iep-june-2022-financial-deepening-for-stronger-growth-and-sustainable-recovery

International Organization of Securities Commissions (IOSCO). (2017). Annual report 2017. IOSCO. https://www.iosco.org/annual_reports/2017/pdf/CompleteAnnualReport2017.pdf

Johnson, W. G. (2022, August). Caught in quicksand? Compliance and legitimacy challenges in using regulatory sandboxes to manage emerging technologies. Regulation & Governance. https://doi.org/10.1111/rego.12487

Kumar, S., Li, A., Wong, H., Chauhan, H., Shubhankar, S., Oetama, I. (2023). Indonesia's fintech industry is ready to rise. Boston Consulting Group. https://web-assets.bcg.com/11/8f/644106dd4bdeb4bd272eccb1901c/indonesia-fintech-report-28-03-2023.pdf

McCarthy, J. (2023, March). From childish things: the evolving sandbox approach in the EU's regulation of financial technology. Law, Innovation and Technology, 1-24. https://doi.org/10.1080/17579961.2023.2184131

Monetary Authority of Singapore. (2022, April). Overview of regulatory sandbox. Monetary Authority of Singapore. https://www.mas.gov.sg/development/fintech/regulatory-sandbox

Nisaputra, R. (2022, August 4). Aturan Fintech Baru: Modal Disetor Minimal Rp25 Miliar, Asing Dibatasi 85%. From Info Bank News: https://infobanknews.com/aturan-fintech-baru-modal-disetor-minimal-rp25-miliar-asing-dibatasi-85/

Njuguna, R., & Sowon, K. (2021, September). Poster: A scoping review of alternative credit scoring literature. ACM COMPASS, 437-444. https://doi.org/10.1145/3460112.3471972

Organization for Economic Co-operation and Development (OECD). (2019, June). Regulatory effectiveness in the era of digitalisation. OECD. https://www.oecd.org/gov/regulatory-policy/Regulatory-effectiveness-in-the-era-of-digitalisation.pdf

Otoritas Jasa Keuangan. (2021, n.d.). Daftar perusahaan fintech peer to peer lending ilegal (Juli 2018 - Januari 2021). Investasi. https://sikapiuangmu.ojk.go.id/FrontEnd/CMS/Article/20650

Otoritas Jasa Keuangan. (2023a, January). Data pencatatan dan regulatory sandbox IKD. Statistik IKD. https://ojk.go.id/GESIT/more/Grafik/31

Otoritas Jasa Keuangan. (2023b, February). Penyelenggara IKD dengan status tercatat di OJK per April 2023. Otoritas Jasa Keuangan. https://ojk.go.id/id/berita-dan-kegiatan/publikasi/Pages/Penyelenggara-IKD-dengan-Status-Tercatat-di-OJK-per-April-2023.aspx

Otoritas Jasa Keuangan. (2023c, February). Siaran pers: Perkuat organisasi, OJK lantik Pimpinan satuan kerja. Otoritas Jasa Keuangan. ojk.go.id/id/berita-dan-kegiatan/siaran-pers/Pages/Perkuat-Organisasi,-OJK-Lantik-Pimpinan-Satuan-Kerja.aspx

Otoritas Jasa Keuangan. (n.d.). Peraturan OJK 2016-2022. Otoritas Jasa Keuangan. Retrieved 2023, from https://www.ojk.go.id/id/kanal/perbankan/regulasi/peraturan-ojk/default.aspx

Parker, C., & Nielsen, V. L. (Eds.). (2011). Explaining compliance: Business responses to regulation. Edward Elgar. Pei, S. F. (2018). Singapore approach to develop and regulate FinTech. Handbook of Blockchain, Digital Finance, and Inclusion, 1, 347-357. https://doi.org/10.1016/B978-0-12-810441-5.00015-4

Philipsen, S., Stamhuis, E. F., & de Jong, M. (2021). Legal enclaves as a test environment for innovative products:

Toward legally resilient experimentation policies. Regulation & Governance, 15, 1128-1143. https://doi.org/10.1111/rego.12375

PricewaterhouseCoopers (PwC). (2021, August). Digital Trust NewsFlash. PwC Digital Services. https://www.pwc.com/id/en/publications/digital/digital-trust-newsflash-2021-03.pdf

Rumata, V. M., & Sastrosubroto, A. S. (2019). The paradox of Indonesian digital economy development. In E-Business - Higher Education and Intelligence Applications (pp. 1-18). IntechOpen. https://www.researchgate.net/publication/341890292_The_Paradox_of_Indonesian_Digital_Economy_Development

Singapore Fintech Association. (2021, November). Fintech talent report 2021: Building a sustainable fintech workforce. Singapore Fintech Association. https://singaporefintech.org/wp-content/uploads/2021/11/SFA-Accenture-FinTech-Talent-Report-2021.pdf

Sugandi, E. A. (2021, August). The COVID-19 pandemic and Indonesia's fintech markets. ADBI Working Paper Series, (No. 1281), 1-25. https://www.adb.org/sites/default/files/publication/728046/adbi-wp1281.pdf

Suleiman, A. (2021, March). Improving consumer protection for low-income customers in P2P lending. Center for Indonesian Policy Studies, (Policy Paper No. 34), 1-40. DOI: 10.35497/343534

TechinAsia. (n.d.). Database companies. TechinAsia. Retrieved March, 2023, from https://www.techinasia.com/companies

Tritto, A., He, Y., & Junaedi, V. A. (2020, December). Governing the gold rush into emerging markets: a case study of Indonesia's regulatory responses to the expansion of Chinese-backed online P2P lending. Financial Innovation, 6(1), 1-24. DOI: 10.1186/s40854-020-00202-4

Undheim, K., Erikson, T., & Timmermans, B. (2022, November). True uncertainty and ethical AI: Regulatory sandboxes as a policy tool for moral imagination. AI and Ethics. https://doi.org/10.1007/s43681-022-00240-x

UOB. (2021, November). Fintech in ASEAN 2021: Digital takes flight. UOB. https://www.uobgroup.com/techecosystem/news-insights-fintech-in-asean-2021.html

Washington, P. B., Rehman, S. U., & Lee, E. (2022, December). Nexus between regulatory sandbox and performance of digital banks—A study on UK digital banks. Journal of Risk and Financial Management, 15(12), 610-628. https://doi.org/10.3390/jrfm15120610

Wijaya, T. (2023, May). The rise of innovative credit scoring system in Indonesia: assessing risks and policy challenges. Center for Indonesian Policy Studies. https://www.cips-indonesia.org/?lang=id

World Bank Group. (2020b, n.d.). Global experiences from regulatory sandboxes: finance, competitiveness & innovation global practice. The World Bank. https://documents1.worldbank.org/curated/en/912001605241080935/pdf/Global-Experiences-from-Regulatory-Sandboxes.pdf

World Bank Group. (2020a, November). Key data from regulatory sandboxes across the Globe. The World Bank. https://www.worldbank.org/en/topic/fintech/brief/key-data-from-regulatory-sandboxes-across-the-globe

Interview List

Interview 1 – An ICS company (2023, January 20). Personal communication.

Interview 2 – An aggregator company (2023, January 30). Personal communication.

Interview 3 – An ICS company (2023, February 1). Personal communication.

Interview 4 – An ICS company (2023, February 3). Personal communication.

Interview 5 – A financial regulator (2023, February 5). Personal communication.

Interview 6 – A business association (2023, February 24). Personal communication.

APPENDIX 1. LIST OF DIGITAL FINANCIAL INNOVATION (DFI) ENTITIES IN INDONESIA

The DFI regulatory sandbox creates a safe testing environment in which the regulator and operators are able to experiment with technology and new business models without necessarily compromising consumer safeguards. From the perspective of the regulator, the sandbox also provides an opportunity to design evidence-based policy that suits new business models based on the regulatory, economic, and technical assessment that has taken place during the experimentation process. Companies benefit from some waivers or exemption from rules that might otherwise impose a considerable regulatory burden.

Table 5.
List of DFI Entities in Indonesia (April 2023)

#	Cluster	Business Model	Number
1	Aggregator	An electronic platform that collects and compares Financial Service Institution (Lembaga Jasa Keuangan, LJK) products such as credit cards, insurance products, mortgages, savings, and other financing products.	40
2	Credit Scoring	An electronic platform that collects and compares Financial Service Institution (Lembaga Jasa Keuangan, LJK) products such as credit cards, insurance products, mortgages, savings, and other financing products.	20
3	Financing Agent	An electronic platform to assist LJKs by delivering financing information to prospective and LJK customers.	7
4	Financial Planner	An electronic platform to provide financial advice regarding investment products offered by LJKs through professional AI technologies.	6
5	Funding Agent	An electronic marketing platform to assist LJK in attaining funding customers.	3
6	E-KYC	An electronic platform that provides customer verification and identification services based on data from the Department of Population and Civil Registration (Dukcapil).	6
7	Insurance Hub	A system that assists the distribution process of insurance claims, connecting insurance brokers, distribution partners, related insurance companies, and customers when conducting premium, insurance, and insurance claim transactions.	1
8	InsurTech	A digital platform that partners with brokers and/or insurance companies to provide purchasing insurance product information by submitting insurance claims to increase the claim process efficiency.	2

9	Online Distress Solution	An electronic platform that offers negotiation services for borrowers with specific criteria through discount offers, financing plans, or a mixture of discount services and payment options to new borrowers.	1
10	Property Investment Management	A fundraising platform developed by the public to provide property rights management without creating derivatives to be traded on the secondary market.	1
11	RegTech – eSign	An electronic platform to provide digital signatures in electronic certificates from the Ministry of Communication and Information.	5
12	RegTech – PEP	An electronic platform that provides high-risk consumer detection services by conducting consumer background investigations.	1
13	Tax & Accounting	A DFI product that offers financial report preparation services built on accounting or online tax reporting standards.	2
14	Transaction Authentication	An electronic platform that identifies and verifies customers using alternative data on top of the data from the Department of Population and Civil Registration (Dukcapil).	8
15	Wealth Tech	An electronic platform that integrates various financial and supporting services of conglomerate group companies and their business partners to enable user access and better financial management, ranging from financing, banking, investment/funding, to insurance.	2
	Total Number		105

Source: OJK (2023b), compiled by the author.

APPENDIX 2: TWO AFTECH CODES OF ETHICS

Code of Ethics for Digital Finance Innovation

The Code of Ethics for Digital Financial Innovation serves as an instrument to ensure the compliance of DFI organizers with existing regulations related to DFI operations. This Code has a direct impact on the eligibility of DFI organizers in the regulatory sandbox since the heaviest penalty can result in the DFI organizer's membership being revoked. To ensure the compliance of DFI organizers in the long term, AFTECH periodically performs third-party due diligence checks. The Code of Ethics for Digital Finance Innovation covers the aspects of transparency, risk management, and the goodwill principle. A summary of the code is listed in Table 6.

Table 6.
Code of Ethics for Digital Finance Innovation

Transparency	Risk Management	Goodwill Principle
• Operators must inform users and operators of their rights and responsibilities. • Any types of fees must be informed clearly. • Possible risks for users must be informed clearly. • Operators must inform the allocation of funds from the customer. • Operators must provide complaint services.	• Operators must anticipate potential risks for users and possibilities of product abuse. • Operators cannot impose additional fees or advertise without users' consent. • Operators must verify user data accuracy and establish adequate systems to support it. • Operators must not manipulate users' data.	• Operators must not impose misleading terms and conditions, as well as unreasonable interest or charges. • Operators must implement goodwill principle in user data use. • Operators must not use services from third parties blacklisted by OJK and/or AFTECH. • Operators must not undertake violent actions, including cyberbullying. • Operators must implement programs that improve financial literacy and inclusion.

Source: AFTECH (2019)

Code of Ethics for Personal Data Protection

In December 2021, AFTECH issued a Code of Ethics for Personal Data Protection to ensure responsible digital financial innovation (AFTECH 2021; see also Wijaya 2023). This Code is aimed at addressing common issues surrounding the data subject protection, including but not limited to consent management, data retention and the use of data, and access restriction to the user's devices.

The development of this Code was driven by member concerns about eroding trust and confidence. It aims to provide legal certainty for customers and to improve oversight of business operations, demonstrating AFTECH's commitment to a safe digital environment.

The Code of Ethics for Personal Data Protection sets customer consent as its cornerstone. All fintech companies must obtain the data subject's consent before processing personal data. This request for consent must be unbundled from other terms and conditions and written clearly and concisely, using language that is easily understood by the data subject.

Besides consent management, this Code also promotes the data minimization principle, which pushes back against fintech companies' impulse to collect vast quantities of personal data. Instead, companies must limit the collection of personal information to that which is directly relevant and fit to purpose.

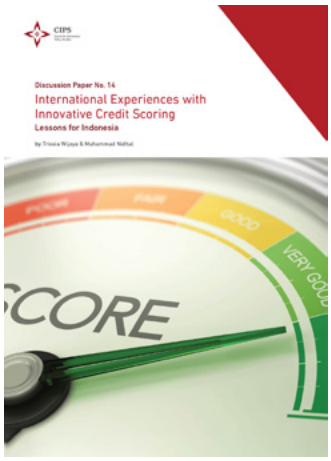
The Code also introduces data retention policies. The basic principle of data retention is that companies, as data controllers, are required to conduct regular reviews of personal data that is no longer needed and delete it.

ABOUT THE AUTHOR

Dr. Trissia Wijaya is the former Head of Economic Opportunities Research at Center for Indonesian Policy Studies. She is a political economist with specialist expertise in developing gender-sensitive infrastructure policy and designing programs for women's economic empowerment. She published several papers in leading academic journals and policy outlets dealing with issues related to green development, infrastructure financing, and public-private partnerships.

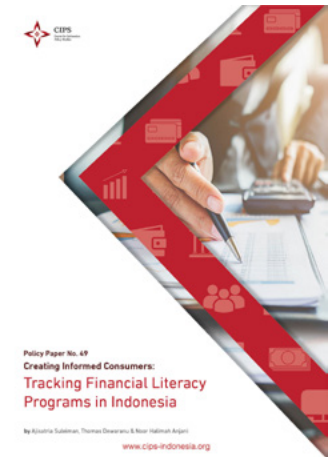
She holds a doctorate degree in Politics and International Studies from Murdoch University, Australia and a master's degree in International Relations from Ritsumeikan University, Japan.

Explore other paper published by Center for Indonesian Policy Studies



International Experiences with Innovative Credit Scoring Lessons for Indonesia

The Rise of Innovative Credit Scoring System in Indonesia: Assessing Risks and Policy Challenges



Creating Informed Consumers: Tracking Financial Literacy Programs in Indonesia

Go to our website to access more titles:
www.cips-indonesia.org/publications

The Center for Indonesian Policy Studies invites those interested to support our advocacy by joining one of our Donor Circles.

If you or your organization is interested to cooperate and engage more closely with the work of CIPS, please contact:

Anthea Haryoko
Chief Innovation and Development Officer
Anthea.haryoko@cips-indonesia.org

ABOUT THE CENTER FOR INDONESIAN POLICY STUDIES

Center for Indonesian Policy Studies (CIPS) is a strictly non-partisan and non-profit think tank providing policy analysis and practical policy recommendations to decision-makers within Indonesia's legislative and executive branches of government.

CIPS promotes social and economic reforms that are based on the belief that only civil, political, and economic freedom allows Indonesia to prosper. We are financially supported by donors and philanthropists who appreciate the independence of our analysis.

KEY FOCUS AREAS:

Food Security & Agriculture: To enable low-income Indonesian consumers to access more affordable and quality staple food items, CIPS advocates for policies that break down the barriers for the private sector to openly operate in the food and agriculture sector.

Education Policy: The future of Indonesia's human capital need to be prepared with skills and knowledge relevant to the 21st century. CIPS advocates for policies that drive a climate of healthy competition amongst education providers. Such competition will drive providers to constantly strive to innovate and improve education quality for the children and parents they serve. In particular, CIPS focuses on the improvement of operational and financial sustainability of low-cost private schools who serve the poor.

Economic Opportunities: CIPS advocates for policies that expand economic involvement and opportunities for Indonesian entrepreneurs and businesses; as well as for policies that open wider opportunities for lowincome Indonesians to access decent incomes and create wealth.

www.cips-indonesia.org

facebook.com/cips.indonesia
@cips_id
@cips_id
Center for Indonesian Policy Studies
Center for Indonesian Policy Studies

Jalan Terogong Raya No. 6B
Cilandak, Jakarta Selatan 12430
Indonesia