MONASH University

AUSTRALIAN CENTRE FOR FINANCIAL STUDIES

Catching-Up with Indonesia's Fintech Industry

Working Paper

Authors:
Kevin Davis, Rodney Maddock and Martin Foo

**This work was undertaken with generous research support from Otoritas Jasa Keuangan, the Indonesian Financial Services Authority (see over)*

MONASH BUSINESS SCHOOL

Thought Leadership in the Financial Sector

CATCHING-UP WITH INDONESIA'S FINTECH INDUSTRY

05 MAY 2017

Abstract

The innovative use of technology in finance is posing challenges to many traditional business models. At the same time it is challenging regulators. The key issue they face is how to balance the desire to encourage new businesses so as to intensify competition and provide better customer services in the sector, while protecting the system and consumers from excessively risky behaviour and potential disruption. For Indonesia the opportunity is very large given the uneven availability of finance and low levels of financial inclusion.

This paper explores the new Indonesian regulation of platform lending in the light of standard regulatory problems, international experience with regulating the sector, and the particular needs of Indonesian development.

Acknowledgement

In 2016, Otoritas Jasa Keuangan (OJK) and Australian Centre for Financial Studies (ACFS) signed a Cooperation Agreement to facilitate joint research on topics of mutual interest. In accordance with ACFS charter, all research is evidence based and in most case the papers will be published.

This research into fintech regulation and the resultant papers were commissioned by OJK to underpin the Authority's ongoing development of regulation for the sector.

The research was undertaken by four senior executive and researchers from OJK, Dr. Hendrikus Passagi, Mr. Tuahta Saragih, Dr. Muhammad Faisal Fariduddin A. Nasution, Mrs. Febtina Setia Retnani, working with ACFS executive, Prof Kevin Davis, Prof Rodney Maddock and Martin Foo.

Additionally, we would like to express our sincere appreciation to OJK Chairman, Dr. Muliaman Hadad, who scoped and guided the project.

1. Introduction

As in much of the rest of the world, fintech is one sector which has emerged quickly in Indonesia. The number of new fintech entities has doubled in the past year which has put regulators under pressure to find a legal framework which allows them to operate in the formal financial sector and provides appropriate protections for customers and for the nation.

As in other countries new technological possibilities have the potential to disrupt traditional financial business models in Indonesia. As elsewhere, regulators are trying to understand how best to address the new challenges this brings. The applicability to fintech business models of standard approaches to regulating banks, insurance companies and wealth managers are under challenge everywhere.

At the heart of fintech lies the increasing ease and falling costs associated with the capture, transmission, storage and analysis of data in digital form. The critical feature of fintech is that it uses advances in technology to overcome the financial frictions of imperfect information and transactions and real resource costs which generate the rationale for particular types of financial institutions and markets. Technological innovations, such as the internet, mobile phone technology, and data processing capabilities have two significant effects.[1] First, they change the nature of information availability. Second, they reduce the physical transaction and resource costs involved in producing and distributing financial products and services.

The classification of fintech is not simple. For example, Business Insider (2016) describes six areas of fintech activities that consist of the 20 types as shown in Table 1. However it is important to realize that not all are equally important: for the United States (US) some 29 per cent of fintech companies are involved in payments and 28 percent in lending, so that those two sectors alone dominate the industry (Citi 2016). In Indonesia these two types of business are also important with payments activities regulated by the Central Bank of Indonesia, and lending (and investing) under the domain of the Indonesian Financial Services Authority (OJK).[2]

---

[1] In addition it can be argued that technological developments in other sectors have also raised expectations of consumers of financial services, whereby the consumer expects every service to be more practical (PwC 2014).
[2] OJK stands for Oritas Jasa Keuangan which is the formal name of the regulator also referred to as the Financial Services Authority. OJK was established in 2011 to take on the roles of prudential regulator and market conduct regulator.

Table 1: Types of fintech activities

Payments and transfers	Lending and financing	Retail banking	Financial management	Insurance	Markets and exchanges
Consumer payments	Peer-to-peer	Consumer banking	Small and medium tools	Agent	Retail investing
Payments backend	Consumer lending	Banking infrastructure	Personal finance	Brokerage	Institutional investing
Point of sale	Business lending		Financial research/data		Blockchain
International transfers	Crowdfunding		Financial transaction security		
	Equity funding				

Source: Business Insider Intelligence 2016

In December 2016, OJK released new regulations designed specifically to deal with one aspect of the fintech revolution – that involving peer-to-peer (or platform) lending. The regulations also created a "regulatory sandbox", enabling platform operators to undertake business at a limited scale once registered, but before fully licensed. This paper provides an overview of the new regulation and examines how it deals with the various risks posed from such innovations while endeavouring to maximize the economic and social gains for the Indonesian economy and society. In doing so, the paper outlines a checklist of minimum components of a regulatory structure for dealing with such risks against which regulation of platform operators might be judged and uses this as an organising framework for explaining the regulatory approach. Compliance with such a checklist is however, only a necessary (but not sufficient) feature of good regulation, since the form and details of regulation adopted are critical.

The following section provides a brief overview of the nature of platform lending activities, outlining potential benefits and highlighting potential issues of concern to regulators. Section 3 considers the particular developmental challenges which Indonesia faces and which might be addressed in part by astute use of fintech operations. The next section of the paper sets out a regulatory checklist for regulation of peer-to-peer (P2P) activities, which is followed by a brief overview of international experience in designing regulations and use of regulatory sandboxes. Section 6 reviews the Indonesian regulation in some depth, explaining how it deals with the checklist components. Section 7 considers whether there are areas in which the regulation might be adapted over time to better achieve its objectives, and Section 8 concludes.

2. Platform (P2P) lending

Peer-to-peer lending is essentially a new type of brokerage activity involving a different way of matching potential investors with borrowers, and allocating the risks involved made feasible by fintech. Compared to traditional brokerage activities, digital and communications technology enables: electronic (rather than physical) contracting; divisibility of loan contracts across many lender/investors; investor diversification; use of more information in credit assessment and risk-based loan pricing; algorithmic methods for matching multiple borrowers and lenders and determining interest rates involved. Compared to traditional banking, P2P operators do not take on credit risk (the investors do) and, by matching investors with borrowers, do not provide investors with liquidity nor take on interest rate risk (again the investors do).

Individual accounts for each investor and borrower are maintained by the operator, who may also act as custodian of the assets (loan contracts) or outsource that to a third-party custodian. The operator also acts in an agency role for investors by managing the collection of loan repayments from borrowers and distributing them to investors. While investors will be provided with information about borrower characteristics relevant for assessing credit risk, the identity of borrowers remains anonymous to them. In practice, there can be many variants of the platform lending model involving: its availability to retail or institutional investors; focus on personal or business borrowers; different interest rate determination and lender-borrower matching arrangements; possible operation of a secondary market for investors to sell existing loan claims.

All the variants however have one aim: to diversify the types of lending available within the economy. For many economies, the basic current alternatives have highly regulated banks at one end of the lending spectrum, and (almost) unregulated money lenders at the other. The new lending platforms sit in the middle, using technology to match a wide range of lenders with a broad set of borrowers. Individuals can use the platforms to lend to small businesses while being provided with some quality control in the process. This has the potential to widen access to finance.

The nature (and variety) of platform lending arrangements creates complications for design of appropriate regulation to deal with such risks, while simultaneously facilitating socially valuable development of the activity. As explained above, platform lending is very different to traditional banking such that Basel-type prudential regulation is not appropriate.[3] Also, market conduct regulation has generally been designed to apply specifically to particular types of existing activities or business models, and is thus not necessarily suitable for new models such as platform lending (ASIC 2016). Regulators globally have thus struggled to identify appropriate regulatory arrangements, with some attempting to apply existing regulations to the new models and others designing new, specific, regulations.

Fintech operators also often struggle to cope with the challenges of financial regulation – particularly those involved in small "start-up" companies where operational knowledge is primarily technology-based. Moreover the likely commercial viability of the proposed business model can often only be assessed by its use to provide justification for investment to generate scale through use of the model. The costs of complying with regulations which need to be met to trial the business model can create a significant regulatory barrier to entry. A number of regulators in other jurisdictions have responded to this dilemma by creating a regulatory sandbox in which fintech start-ups can undertake limited activities to assess commercial viability, and where the regulators can limit and better understand risks involved. If judged successful, operators can expand activities and comply with regulations, while regulators may discover improved forms of regulation as a result of the experiment.

Operators of new business models without established reputations also face the problem of gaining consumer confidence. In that regard, while regulation can place constraints on some profitable activities, the introduction of regulation can serve as an official certification mechanism, helping operators to overcome consumer reluctance to engage with them. (It can also reduce risks to reputation from spill-overs from failures of non-regulated entities). It is notable that the Indonesian Fintech Association was not opposed to, and actively supportive of, the introduction of some form of regulation.

3. Opportunities and challenges for Indonesia

This very brief outline of platform lending models highlights both the potential benefits of its growth to a country such as Indonesia, as well as the challenges confronting regulators. On its development path, Indonesia faces a significant shortage of infrastructure, and an inability to generate enough savings through traditional domestic institutions to fund what is needed. Development of financial markets and institutions to better tap into foreign investors and allocate funds domestically is thus an important policy goal. A second, and partially related

[3] Capital requirements for "credit risk" are not appropriate (since the investor knowingly takes on that risk) although justifiable to protect investors against "operational risk", while the matching of timing of lender and borrower cash flows means that liquidity requirements (such as Basel) are also not appropriate.

concern, has been its complex (multiple island) geography which has made it difficult to deliver services in a consistent manner. These have led to a particular interest in the potential for fintech to help address two major concerns of funding for small businesses. The third major concern is the low level of financial inclusion.

Indonesian President Widodo set out his development path for Indonesia in 2015 with increased infrastructure spending near the top of the list. The call on the taxation system and on financial institutions to finance the infrastructure spending as well as ongoing business and Small and Medium - Sized Enterprises (SME) investment is thought to exceed their current capability. More efficient funding of business investment, and access to new funding sources, will reduce the pressure on other funding sources. Small business funding is of particular concern.

The vast majority of businesses in Indonesia are small: they constitute over 99 percent of the number of businesses and employ 97 per cent of the workforce while contributing just over 60 per cent of Gross Domestic Product (GDP). As common elsewhere, but arguably more pronounced in Indonesia, SMEs face problems in access to loan finance due to issues of proximity, the requirement of collateral, and the need for formal bank accounts Indonesia also has issues with financial inclusion. World Bank Data Base suggests that only 36.1 per cent of Indonesians aged over 15 has an account at a financial institution, and just 13.1 per cent has ever borrowed from a financial institution (which includes credit union, microfinance organisations etc).

The tyranny of distance can be an important problem in Indonesia. While the main island, Java contains half the national population (of just over 250 million), the remainder is spread over the country's 13,000 islands. This complicates the delivery of all services, not least finance, and the potential of fintech to reduce the problems for SME funding and financial inclusion caused by the tyranny of distance is obvious. That potential is supported by the ready acceptance and use of mobile telephony in Indonesia. While only 34 per cent of the population uses the internet actively, 85 per cent has a mobile phone and there are 1.36 SIM cards in use per capita (World Bank 2017). The use of multiple SIM cards is a reflection of the sophistication of phone use in Indonesia.

The country has experienced explosive recent growth in its fintech sector with 78 percent of the companies in the sector being founded in 2015-16. Capital investment in the sector in 2016 was around 500 billion rupiah ($US36 million) which equates to about one percent of the equity capital raised on the Jakarta stock market in that year. At the end of 2016 there were 57 “fintechs” engaged in developing or operating payments systems applications and 23 developing or operating platform lending activities (Communication from OJK).

The potential benefits of growth in platform lending for Indonesia are accompanied by societal and economic risks which create significant regulatory challenges for OJK whose mandate includes promoting financial development as well as financial consumer protection.

While Indonesia has some specific geographical and developmental challenges, regulators globally are facing many of the same issues. They are all concerned to make sure their country takes advantage of the opportunities to improve the financial system implicit in fintech, but they are all also concerned to make sure that the risks involved are understood and protected against.

Most countries want fintech regulation which:

- provides opportunities for making payments more efficiently
- improves the matching of borrowers to lenders
- improves access to finance from SMEs
- protects customers from malpractice
- provides start-ups with some certainty about what is permitted.

4. Best practice regulation: necessary conditions

All jurisdictions face a quite similar set of problems in dealing with platform based lending. The risks include: borrowers may be induced to take on unsuitable loan products (including excessive interest rates), incur excessive levels of debt (from multiple platforms), face inappropriate debt collection practices if repayments are not met, and face privacy risks from operator misuse of personal/business information provided. Investors face credit and liquidity risks from investment of their funds, and may not be aware of the extent of such risks. They also face operational risks associated with the platform operator. One, which affects actual versus expected returns and ultimately the operator’s viability if investor expectations are disappointed, is that the operator’s ability to assess borrower credit risk may be poor. A second is that funds provided might not be applied to lending (such as in a Ponzi scheme) or that high risk loans are made to related parties of the operator at inadequate interest rates. A third is that cessation of activities of the operator creates problems for collecting borrower loan repayments due – since investors do not know the borrower identity.

Limiting unnecessary risks, or ensuring that stakeholders are adequately informed and aware of those risks, is thus an important role for regulation. Table 2 sets out our check-list of considerations for financial regulators designing new regulations for dealing with a new form of activity such as platform based lending. (The coverage by Indonesian regulation of these criteria is also indicated, based on the analysis of that regulation in a later section).

As a first step for regulators it is important to adequately define the activity which is to be regulated (item 1 on the list). That needs to be sufficiently broad to encompass a range of (perhaps as yet not seen) business models which are essentially undertaking the same function of matching investor/savers with borrowers. It is also necessary to identify which agency has regulatory responsibility (item 2), and achieve clarity on a range of licensing, tax, and regulatory requirements which are needed to be met by new businesses (item 3). Then, it is important that platform operators have skills (item 4), integrity (item 5), resources (item 6), and suitable business models and business plans (item 7) to achieve viability and transfer of operations to a third party in the event of non-viability.

Borrowers and investors must also be protected from malfeasance or operational failures. Given the specific nature of the business, involving managing investments and making loans, special compliance and auditing requirements can be expected (item 8). For protection of investors, arrangements for handling of client monies need to be specified (item 9) as well as protection of title to the assets (loans) held via the platform (item 10). For both borrowers and investors, it is important that contract terms are clearly specified and compliant with law (item 11), and some arrangement for enabling group customer actions if needed (such as via appointment of an independent trustee) put in place (item 10).

Both borrowers and investors can be subject to risks of invasion of privacy or losses due to loss of data which needs to be considered (items 12, 13). Stakeholders also need appropriate information to enable confident and well informed use of the platform (item 13). Use of P2P platforms may not be suitable for particular borrowers or investors and therefore there may be limits on access by certain types of borrowers (item 14) or investors (item 15). Borrowers may need protection from excessive interest rates (item 16) and inappropriate default recovery practices (item 17) while investors also need assurance that platform operators will manage borrower repayment obligations effectively and appropriately (item 17).

For both groups of stakeholders, there needs to be some form of complaints handling process specified (item 17). Finally, because platform lending (like other parts of the financial sector) is vulnerable to money laundering or terrorist financing, suitable Know Your

Customer and Anti-Money Laundering (KYC/AML) arrangements need to be in place (item 18).

The final column of the table expresses a view as to whether the criteria are addressed in the Indonesian legislation.

Table 2: Platform lending regulatory checklist

	Regulation Criteria	Indonesia
1	Existing definition for platform or P2P lending	Y
2	Regulatory responsibility for P2P lending assigned	Y
3	Licensing process and requirements defined	Y
4	Minimum credit and risk modelling requirements	Y?
5	Regulatory minimum governance and “fit and proper” requirements	Y
6	Minimum capitalisation requirement	Y
7	Requirements for business continuity	Y
8	Special compliance/auditing requirements	Y
9	Money handling arrangements specified	Y
10	Suitable trustee/custodian arrangements required	N?
11	Legal contracts, plus terms and conditions approved	Y
12	Privacy and data protection management requirements	Y
13	Disclosure/information sharing provisions specified	Y
14	Profile of permissible borrowers defined	Y
15	Restrictions on “eligible investors”	N?
16	Limits on interest rates that P2P lender can charge	N?
17	Default recoveries and complaints arrangements	Y
18	KYC/AML requirements for P2P borrower	Y

Source: ACFS analysis developed in conjunction with Justin Wright (Beehive Asia) and Tom Moyes (Mekong Business Initiative-Asian Development Bank) for the MBI Fintech Bootcamp, Singapore, November 2016

Note: ‘Y?’ indicates likely: ‘N?’ unlikely – in neither case is it completely clear from the regulation.

5. International approaches

The approach taken to fintech regulation varies widely across jurisdictions. For instance, with respect to marketplace lending the US has taken a reactive approach, relying on existing rules and regulations, while the United Kingdom (UK) (and to some extent, China) have been proactive, developing specific regulatory structures (Word Economic Forum 2016). In some countries, like Australia, marketplace lending platforms are regulated as financial intermediaries or managed investment schemes, while in others, like France, Germany and Italy, they are regulated as banks and need a banking licence to operate (Word Economic Forum 2015, Figure 10).

Regulation is often classified on the spectrum of 'rules-based' versus 'principles-based' regimes. In the former, regulation tends to be prescriptive and detailed (which may deter innovation), while in the latter regulation is communicated through broad goal - or outcome - focused statements (but may give rise to concerns over fairness/bias in application). Most regulatory systems display elements of both. With fintech, erring on the side of principles - based regulation would seem to be desirable given the novelty of the business models and practices being regulated (Brummer, C. and Gorfine, D., 2014)

Regulatory supervision that focuses on products, rather than functions, appears inadequate when looking at the rapid rate of technological progress. This progress can create 'grey areas' as to which body should be regulating a specific business (Arner, D.W. 2016). The success of any regulatory model does, of course, depend on many factors, such as how the functions and objectives of regulators are expressed and how effectively they coordinate with one another.

The US has been inclined to allow businesses to develop under a range of existing rules. There is wide consensus amongst regulators however that the US financial regulatory structure is overly complicated and unwieldy. This presents the risk that financial innovation will fall between the cracks of what is already a convoluted system (Magrann-Wells, R. 2016). The US appears to have recognised this and in December 2016, the Office of the Comptroller of the Currency said it plans to start accepting applications from fintech companies for a special charter that would formally subject them to federal banking rules. Companies that become chartered will get the benefits of being an established company in the eyes of the government. But they will also face anti-money laundering controls and consumer protections that apply to other lenders (Nichols, R. 2016).

The UK is generally regarded as the world leader in its early movement toward a principles-based approach to fintech regulation. The president of the American Bankers Association has noted that: "our regulators can learn much from Britain about how to stimulate new ideas from outside banking and to integrate them under a common set of regulatory expectations."

Australia's 'twin peaks' model sees financial regulation split into two broad functions: market conduct regulation (ASIC) and prudential regulation (APRA). This model has since been adopted by the Netherlands, Belgium, New Zealand, the UK, and South Africa. As financial systems increase in complexity, the twin peaks model may have an advantage over other models in that it is less susceptible to functional overlap than an 'institutional' model (for example the Chinese model) and less susceptible to internal conflicts of interest that arise within a 'super-regulator' (such as the former Financial Services Authority in the UK) (Godwin, A., Guo, L. and Ramsay, I. 2016).

Reflecting the knowledge gaps associated with outcomes from fintech activities, many regulators are moving towards a sandbox approach. In a sandbox, new businesses are given some freedom from some regulations on a limited and experimental basis. This allows the regulator to learn about the opportunities and risks without any final determination that the business model being considered should be able to persist. Indonesia has adopted the approach of designing new, specific, platform lending regulations and has incorporated a "regulatory sandbox" approach into its approach. Table 3 shows the status of the regulatory proposals across a range of countries. It is notable how many countries issues consultation papers in 2016 (Kent, R. and Reid, E. 2016).

Table 3: Regulatory proposals and practices in a range of jurisdictions as at October 2016

COUNTRY/REGULATOR	STATUS	KEY ISSUES
United Kingdom (FCA)	Innovation Lab – 2014 Consultation paper – November 2015	24 of 69 applications for sandbox accepted – October 2016
Singapore (MAS)	Consultation paper – June 2016	
Australia (ASIC)	Consultation paper – June 2016	Financial Advice only
Malaysia (Bank Negara)	Consultation paper – July 2016 Framework details – October 2016	
Canada (Ontario SC)	"LaunchPad" details – October 2016	Innovation Hub, will consider regulatory relief, will consider applications
Hong Kong (HKMA)	Fintech Facilitation Office Fintech Innovation Hub Sandbox – September 2016	Only banks looking to use fintech, not fintech start-up firms
Thailand (BofT)	Consultation – September 2016	
USA	Bill H.R. 6118 introduced in Congress – September 2016	CFPB has "no-action letter policy"
Abu Dhabi (FSRA)	Consultation papers (RegLab) – May 2016 and August 2016	
EU (European Commission)	Consideration of issue	

Source: ACFS survey of Regulator's websites

Britain has a well-developed sandbox model, having been the leader in this regard. However, some countries dispute the UK's approach. For instance, Germany's financial regulator, BaFin, has been highly critical of the Financial Conduct Authority's (FCA) lighttouch regulatory sandbox approach and made it clear that no similar regime will be introduced in Germany, adopting the view of 'same business, same risks, same rules'.[4]

The Indonesian fintech regulations have followed the British model in creating a sandbox in which firms and the regulator can learn about risks and opportunities as the businesses mature.

6. Indonesia's fintech regulation

OJK promulgated Regulation 77/POJK.01/2016[5] to provide a legal framework for fintech businesses at the end of 2016 under its legal remit to regulate "other financial services institutions".

The OJK has chosen at this time only to regulate fintech businesses which involve lending through use of platforms to connect investors with borrowers. This is partly a pragmatic choice. One important subset of the industry, payments companies, is already being regulated by the central bank (BI – the Bank of Indonesia). However after payments, the group of platform operators is the most important sub-sector numerically, and can be expected to have a greater impact on the Indonesian economy by facilitating lending to SMEs and across the archipelago. For OJK, this is the most important sub-sector. It is likely that further regulations will be developed subsequently to encompass other fintechs.

The scope of activities included is "the operation of financial services which bring together lenders with borrowers in order to conduct a lending agreement in rupiah directly through an electronic system based on the internet" (Article 1 point 3). There is thus a clear definition of the activities involved meeting criterion number 1 in Table 1. The authority of OJK as the regulator (criterion 2) is enshrined in the regulations and there are substantial obligations specified for reporting of information to OJK.

The legal entities (fintechs) which sit at the heart of the matching between borrowers and lenders are termed "operators". Such operators must be companies or cooperatives[6] with no more than 85 per cent foreign ownership[7] (criterion 3). The Indonesians have chosen to implement a sandbox regime through a registration stage, which can operate for twelve

[5] Subsequent references to, and extracts from, this regulation refer to an unofficial English translation.
[6] Indonesia has a substantial number of financial cooperatives operating in microfinance and credit union activities. Whether there is an economic case for a cooperative structure as a platform operator is unclear, particularly since the regulations appear to prevent owners of the operator also being investors or borrowers via the platform.
[7] Such a limit on foreign ownership is common in the Indonesian financial sector.

months, before a more formal licencing stage. Operators must have R1b (USD75,000) in paid-up capital when applying for registration, and R2.5b when applying for a business licence. (These are substantial sums but not excessively restrictive: GDP per capita is about USD4,000.) Criterion 6 is thus met – and although there is no formal explanation of expected adequacy of that capital requirement, OJK retains the flexibility to adjust the minimum requirement.

The registration stage requires demonstrating operational readiness, compliance with the capital restrictions, business plans, a plan for addressing the rights of parties in the advent of ceasing business (criterion 7), and character assessments of principals (criterion 5). Registration involves an obligation to start providing information quarterly to OJK on business activity, the numbers of borrowers and lenders and on the quality of loans made. Existing fintechs are given six months to apply for registration. During this stage there is also a restriction on how much the operators can lend to any single borrower of R2b (although the regulator has discretion to raise this boundary).

Registered fintechs must apply for a full operation licence within twelve months of registration or the registration will be cancelled. Entities which fail must apply to OJK to confirm the treatment of users.

The licencing stage is more onerous (criterion 6). The fintech is required to set out full list of shareholdings together with individual details including taxation identification, and all sources of capital. Similar information is required for all company officials. The Commissioners and Board of Directors must include at least one person with a minimum of one year's experience in the financial sector and the company must have staff with requisite IT skills. The company is also required to set out its procedures for complying with AML and KYC obligations (criterion 18); its business plan and financial targets; and its operational readiness in terms of property rights and inventory, as well as a plan for the treatment of the treatment of users in the case of the closure of the business (criterion 7).

Interestingly if the OJK fails to accept or reject an application for a licence with twenty days, the application is automatically granted.

Licenced operators must also provide monthly and annual reports to OJK. The monthly reports have mainly to do with operations, finance and complaints. Annual reports are required to provide normal commercial financial statements, as well as statements about the scope of the lending services undertaken.

Violation of the obligations can lead to sanctions: in rising order of severity, from written warnings to fines, to restrictions on business activities, and to revocation of the operating licence. More than one sanction may be imposed at the one time.

6a. Business operations: rights, obligations and prohibitions

The Indonesian legal structure recognises the operator as a middleman with contracts on either side.

The regulations specify many of the details which must be provided in the agreement with lenders: dates, amounts, conditions, penalties, dispute resolution, and resolution mechanism in the event of the business closing (criteria 11, 17). Operators are also required to provide lenders with (depersonalised) information about the purpose to which the loan was put: amount of the loans made, purpose to which they were put, the interest rate charged and the term of the loan (criterion 13).

The agreement with borrowers is simpler; largely terms and conditions of the loan.

There are four conditions applying to fintech operators which are designed to promote national development:

i. Borrowers must be Indonesian citizens or Indonesian legal entities; a restriction which does not apply on the lending side. (criterion 14)

ii. Interest rates on both sides should take account of "reasonableness and the development of the national economy" (Article 17). While this does not impose a strict limit on interest rates charged to borrowers (criterion 16), such limits do exist under other regulations, and this wording provides scope for supervisory "moral suasion" of operators.

iii. Documents "shall use terms, phrases and/or simple sentences in Indonesian language which is easily read and understood" (Article 32)

iv. Operators must "be registered as members of the industry association which has been nominated by OJK" (Article 48).

The last of these requirements can be interpreted as either, or both of, an attempt to promote public confidence in the sector or instil some element of self-discipline by the sector.

The regulator has also insisted on a number of risk and compliance conditions for operators. Entrants must lodge their capital with a bank, must operate escrow accounts for clients' money, and offer individual virtual accounts for each lender (criterion 9). Fintechs are required to have data recovery procedures in place and to store all information in Indonesia (criterion 12). All activities must be able to be tracked, and all devices employed must be capable of providing such an audit trail (criterion 8).

The regulation requires electronic records be kept in accordance with the specified format and retention period.

Fintech operators are subject to a range of prohibitions on the business they can undertake. These have the effect of ensuring that the operators act purely as middlemen: they are prohibited from acting as lender or receiving a loan, taking deposits, or providing guarantees over the obligations of others. Nor are they allowed to provide advice.

6b. Customer recognition and protection

Agreements can be implemented with electronic signatures subject to the relevant Indonesian laws. In receiving money or making loans operators must comply with legislation relating to money-laundering and combating the financing of terrorism (criterion 18).

Provisions for the protection of data and privacy are also important features of the regulations. Two Articles (21 and 22) allow fintechs to share information with their service providers but the bulk of Chapter VI of the regulation is to provide strict controls on the use of private information (criterion 12) Importantly: the Operator shall "ensure that the acquisition, application and utilisation of personal data, and transactions and financial data acquired is dependent upon the approval of the owners of that data unless otherwise determined by legislation" (translation, Article 29 clause c). The line of thought continues in the next clause: the Operator shall ensure that "the use or disclosure of data is based on the consent of the owner …". Breaches of information confidentiality must be notified to the owners of the data.

Article 39 reinforces the privacy aspects: "The operators are prohibited by any means to provide data and/or information concerning users to third-parties except where consent is given".

Operators are also expected to report each complaint received and report on the status of complaint resolution.

6c. Education and development

The Indonesian regulations differ significantly from that of many other countries in its focus on educating both operators and their clients.

Starting from high level principles which should govern the sector – transparency, fairness, reliability, confidentiality, data security and efficient dispute resolution – the regulations go on to spell out the OJK's expectations in some detail. All information must be available in written form suitable for use in court and written in Indonesian (or an Indonesian translation provided). The information about all products should include an information summary of the relevant benefits, costs and risks associated with the product.

Article 34 is very explicit: it requires that operators need to consider the match between the needs and abilities of users. Article 33 requires fintechs to support the implementation of the regulation "to improve literacy and financial inclusion".

7. Discussion

Indonesia has made some very pragmatic choices with OJK's regulation of lending platforms. First, the decision to focus on this sector for the initial regulation is based on the important developmental goal of trying to facilitate more lending to SME's and across the archipelago and noting that the central bank has responsibility for regulation of payments. Other parts of fintech might be regulated subsequently. Secondly, it has chosen to adopt a sandbox model. This regulatory framework provides some protection to firms starting innovative businesses, and limits risks to customers, without necessarily committing the regulator to the final form of regulation.

The design of the regulation is quite consistent with global best practice. It defines what is to be regulated, sets clear hurdles for companies which want to be involved in the sector, establishes technical standards, and provides substantial consumer protections. It also incorporates a graduated set of sanctions.

The promulgated Regulation 77/POJK.01/2016 should be seen as providing the "bare bones" of the regulatory structure. Ultimately flesh will be placed on those bare bones through licence conditions, guidance notes and interpretations by the regulator and by its supervision of operators affected. Only when those implementation arrangements are clarified will the strengths and weaknesses of the regulatory approach be fully assessable. In what follows we identify a number of areas where such clarification is particularly important, and where some issues not explicitly covered in the regulations may need further consideration.

7a. Capital requirements

The regulation is quite specific about the amount of capital required for registration and licensing. It is, however, silent on how capital is to be defined and measured. Is it simply the difference between the assets and liabilities of the operator, as recorded in its accounts? If so are certain items excluded or given a “haircut” to reflect their likely market value (rather than some accounting value). This is the approach adopted in the Basel approach to bank capital requirements, but it can be argued that this is not relevant in this context where, unlike protection of bank depositors, capital is not acting as a buffer to protect investors from loss. An alternative rationale for such a minimum capital requirement in this case is that it demonstrates that the operator has invested in developing a business model to a sufficient scale to be able to operate viably.

If the latter, the difficulty is that the value of reported capital could quickly disappear to zero if, for example, the business loses viability and capital reflected primarily the assets of goodwill and intellectual property value which have fallen in value to zero. In such circumstances, even with required business continuity plans (or living wills) there may be inadequate resources remaining to effect such plans. In such circumstances, some restrictions on allowable assets for calculating capital and/or requirements that some amount of capital is invested in a safe form (such as a bank deposit), in essence as a bond against costs arising from business failure, may be appropriate.

7b. Ownership and activity restrictions

The Indonesian approach has been to limit the opportunities for unscrupulous behavior by market operators by essentially requiring that the platform be a “sole purpose” activity and preventing owners of the market operator from also being customers. This is designed to prevent self-dealing behavior at the expense of other customers (either in the form of favourable allocation of overpriced (relative to risk involved) loan contracts to related party investors, or by enabling underpriced borrowings by related party borrowers to the detriment of investors). However, one potential consequence of this is to limit other financial institutions from being both owners and providing surplus funds to the platform for lending. This may turn out to be an important exclusion, as evidenced by Australian experience where some financial institutions have taken equity shares in operators and are also investors in loans through the platform. Preventing such activity may inhibit growth of the sector (if retail investors are slow to participate) and may also prevent depository institutions with surplus funds for lending to optimally use those to lend to borrowers outside of their current clientele.

7c. Investor base and restrictions

There is no restriction on who can participate as investors through a platform. This is clearly a conscious choice, including allowing foreign investors as well as domestic in line with the hope that the sector can facilitate the inflow of foreign capital and its allocation to productive uses through SME lending. While allowing retail investors to participate is desirable, including through increasing competition with banks for such funds, the dilemma arises of the ability of such investors to assess the risks involved. While the operator is required to consider the suitability of its products for users (article 34), provide information in understandable format (article 32), and implement operations in a way which support financial literacy objectives (article 33), this does leave considerable room for unsophisticated investors to make investments involving risks they do not fully understand. In some other jurisdictions, there are regulatory limits on the amount a retail investor can invest through a single platform, which would be worth consideration – at least in the formative years of industry growth. There is also no specification of required diversification of investor funds across a range of loans, which is a common characteristic of P2P business models found elsewhere. Arguably, this is a business decision which should be left to the discretion of the operator, but in assessing licence applications and determining the suitability of offerings, OJK might be expected to take into account the operator's arrangements for reducing investor risk through diversification requirements built into its model.

The Indonesian regulation is thus at the liberal end of the spectrum in this regard, but is one which is consistent with the desire to maximise investment in SME and related lending. It also simplifies the regulatory task, but at the risk of having to deal with investors with disappointed expectations over poor outcomes and claiming unsuitability of the product. Such outcomes could lead to political concerns and also risk growth of the industry through reputational damage.

7d. Interest rate limits

There is no limit on the rates which can be charged to borrowers (although draft regulation did incorporate a proposed limit). A maximum interest rate may apply anyway, through other legislation/regulation, but it can be argued that since operators are running a market place in which interest rates are determined, the common argument for interest rate ceilings based on lender power has less force. On the other hand, interest rate ceilings may be argued to protect desperate borrowers from themselves – although the requirement for operators to ensure suitability of the product for customers could be argued to be sufficient if applied appropriately by operators. Experience in some other jurisdictions has shown high rejection rates of potential borrower applications for listing on the platform due to high assessed risk of default.

7e. Loan and investment duration

There is no specification in the regulations for either a maximum or minimum duration of loans and, since they are matched, investments. In the absence of the "stamp of credibility" given by licensing, investors have been reluctant to make longer term investments through the fledgling platform lending industry. The consequence is that loans available to borrowers have been relatively short term, in contrast to other jurisdictions where more developed platform lending industries typically operate with investment/loan durations of one to three years. One indicator of success of the regulations (as well as growth in the size of the industry) may well be whether the industry moves to longer investment/loan durations. Doing so would also reduce any concerns about the absence of interest rate limits – since high exploitative interest rates are more typically associated with short term loans which borrowers roll-over frequently.

7f. Operational risk mitigation

While there are a number of requirements in the regulations designed to reduce operational risk, the absence of clear rules around requirements for custodians and trustees to safely hold assets (loan contracts) and represent the rights of customers appears to be a weakness of the regulation. Again, this may be overcome by the specific requirements which OJK put in place in implementing licensing requirements. This would appear to be quite an important issue given the experience seen of an absence of such requirements enabling some unethical platform lenders in China running very large Ponzi scheme types.

8. Conclusion

Regulators globally are struggling with finding an appropriate balance between the desire to achieve the benefits of fintech for their national economy, and their need to protect the financial system and its participants from risks. Developing countries do not have the luxury of waiting to see how the problem is addressed elsewhere; local fintechs are pushing quickly to pursue profitable opportunities.

For countries like Indonesia, the risks and opportunities are probably greater than those in more developed economies. SMEs play a greater role in the economy; financial inclusion is low while technological capability is high; and the development task requires funds to be channelled to their best use while the financial system has limited capacity to do this.

The Indonesian approach has been pragmatic. Its Financial Services Authority has chosen to move quickly, and to focus attention on the peer-to-peer lending channel. This is a rapidly growing niche and one important to help businesses access finance. The regulatory approach adopted is close to best practice. There are some stronger educational and national-interest features than one sees in developed economies and some weaknesses in consumer protection but these can be expected to be dealt with as the regulator gains experience with the sector.

Bibliography

Arner, D.W. (2016), 'Fintech: Evolution and Regulation', Presentation Slides, June. http://law.unimelb.edu.au/__data/assets/pdf_file/0011/1978256/D-Arner-Fintech-Evolution-Melbourne-June-2016.pdf

ASIC (2016), Marketplace lending (peer-to-peer lending) products, Information Sheet INFO 213, March. Available at http://asic.gov.au/regulatory-resources/financial-services/marketplace-lending/marketplace-lending-peer-to-peer-lending-products/ [Accessed 7 August 2016].

Brummer, C. and Gorfine, D. (2014), 'Fintech: Building a 21st-Century Regulator's Toolkit', Center for Financial Markets, October.

Business Insider Intelligence (2016), "Fintech could be bigger than ATMs, PayPal, and Bitcoin combined", http://www.businessinsider.com/fintech-ecosystem-financial-technology-research-and-business-opportunities-2016-2/?r=AU&IR=T

Citi (2016), 'How FinTech is Forcing Banking to a Tipping Point', Digital Disruption

Godwin, A., Guo, L. and Ramsay, I. (2016), 'Is Australia's 'Twin Peaks' System of Financial Regulation a Model for China?', CIFR Paper No. 102/2016, 11 April

Kent, R. and Reid, E. (2016), 'Hogan Lovells says UK Regulation is Blazing a Trail for Fintech – The Times Raconteur UK Fintech Report', 7 June.

Magrann-Wells, R. (2016), 'Fintech's Achilles Heel: The U.S. Regulatory System', *Willis Towers Watson Wire*, 22 July.

Nichols, R. (2016), 'Bank or No Bank, Fintech must be Regulated', *American Banker*, 18 February.

Otoritas Jasa Keuangan (2016), POJK Nomor 77/P0JK.01/2016 Available at http://www.ojk.go.id/id/regulasi/otoritas-jasa-keuangan/peraturan-ojk/Pages/POJK-Nomor-77-POJK.01-2016.aspx

PWC (2014), Blurred lines: How FinTech is shaping financial service, http://www.pwc.com/gx/en/industries/financial-services/fintech-survey/report.html

World Bank (2017) Data Base, http://databank.worldbank.org/data/home.aspx

World Economic Forum (2015), ‘The Future of Fintech: A Paradigm Shift in Small Business Finance’, October.

World Economic Forum (2016), ‘The Complex Regulatory Landscape for Fintech: An Uncertain Future for Small and Medium-sized Enterprise Lending’, White Paper, August.

About the Australian Centre for Financial Studies

The Australian Centre for Financial Studies (ACFS) is a public interest research centre within the Monash Business School.

It aims to facilitate industry-relevant, rigorous research and independent commentary, drawing on expertise from academia, industry and government to promote thought leadership in the financial sector.

Together, ACFS and Monash Business School aim to boost the global credentials of Australia's finance industry, bridging the gap between research and industry and supporting Australia as an international centre for finance practice, research and education.

For further information see: www.australiancentre.com.au | business.monash.edu

For more in this series, visit: http://australiancentre.com.au/publications/working-papers/