DIGITALIZATION: A SAFE PATH TO A MORE INCLUSIVE RECOVERY IN INDONESIA?¹

There are two key longstanding structural constraints to inclusive growth in Indonesia—low financial inclusion and limited access to finance—resulting in a large financing gap. Indonesia's digitalization—growing rapidly in the e-commerce and financial services sector, the latter facilitated by fintech—is helping close this gap. The COVID-19 pandemic will likely serve to further accelerate this digital transformation: adoption of e-commerce and digital payments has increased amidst lockdowns and social distancing. Digitalization can also help counter the impact of the COVID-19 crisis, including through the delivery of government support measures, and support longer-term growth. However, attempting to scale up digitalization quickly as a response to a crisis, is not merely challenging but also potentially risky (e.g., risks to financial stability or cyber risks). Hence, important challenges need to be addressed first (e.g., infrastructure, skills, regulations) to ensure an inclusive and stable recovery.

A. Introduction

1. This chapter explores the opportunities and risks associated with an expansion of digitalization in Indonesia during and post the COVID-19 crisis. It addresses the following key questions: how is digitalization evolving in Indonesia and how does this compare to other economies? What is the economic impact of digitalization, and its associated risks? And finally, what are the key challenges to its expansion, and how can digitalization be safely harnessed to mitigate the economic impact of COVID-19 and in supporting an inclusive and stable recovery in Indonesia?

2. The sections are organized as following: Section B provides an overview of the gaps in financial inclusion and access to credit in Indonesia, and the potential opportunity it presents for digital market penetration; Section C lays out the recent development and trends in digitalization in the economic and financial sectors of Indonesia both before and during the COVID-19 crisis; Section D analyzes the impact of digitalization in closing Indonesia's financing gap; Section E estimates its impact on economic growth; key challenges and risks to the expansion of digitalization in Indonesia are identified in Section F; and finally, Section G concludes with related policies that should be prioritized.

B. Opportunity for Digitalization: Gap in Financial Inclusion and Bank Financing

3. Notwithstanding progress made in recent years, financial inclusion and access to credit in Indonesia remain low (Figure 1). Almost half of the population in Indonesia is still without a bank account, and close to 6 percent of the global unbanked adults reside in Indonesia. The ratio of bank credit to GDP remains low at 35 percent, compared with 60 percent of GDP in mid-1997. In 2017, a mere 17 percent of Indonesians borrowed from a formal bank or microfinance institutions,

¹ Prepared by Purva Khera (APD).
while 36 percent borrowed from informal sources (family, informal money lenders or other sources). The World Bank (2017) finds that the small size of the banking system, weaknesses in the legal and institutional environment, high market power and limited competition, and operational inefficiencies contribute to weak bank intermediation efficiency, thus holding back financial inclusion.

4. **A large financing gap in the micro-, small- and medium-sized enterprise (MSME) sector has contributed to Indonesia’s low productivity and competitiveness.** There are about 63 million MSMEs in Indonesia (which account for 99 percent of all firms in all economic sectors), accounting for 97 percent of employment and contributing close to 60 percent of the country’s GDP; the highest economic contribution amongst ASEAN countries. On the other hand, the size of MSME loans remains amongst the lowest, after Philippines: only close to one-fifth of bank loans are to MSMEs. Notwithstanding several government initiatives, a large share of MSMEs, more than 70 percent, lack access to credit, where bank loans only make up 6 percent of MSME funding sources (World Bank Enterprise Survey). Banks mainly provide collateralized loans to large NFCs creating a financing divide between large and small firms: the MSME financing gap is estimated to be US$165 billion, which equates to approximately 19 percent of Indonesia’s GDP in 2017 (International Finance Corporation, 2017). This has contributed to their low competitiveness and productivity, and their low share in of non-oil and gas exports (about 15 percent).

5. **Low financial inclusion and access to credit will likely exacerbate the adverse impact of the COVID-19 shock on lower income population and MSMEs** (Figure 2). While the pandemic is affecting both larger and smaller firms, the impact on MSMEs is especially severe, because of higher levels of vulnerability and lower resilience related to their size. According to a recent ADB survey, around 75 percent of Indonesia’s MSMEs reported a lack of working capital as the main concern to retain their business during COVID-19. Despite several new government schemes targeting MSME working capital needs, getting credit from banks to cope with the COVID-19 shock was limited: only 1 percent of MSMEs surveyed state that they borrowed from banks. On the other hand, a larger proportion utilized nonbank financial institutions and digital finance platforms for working capital loans.

6. **Digitalization holds great promise in overcoming some of Indonesia’s abovementioned structural constraints.** The digitalization of the economy and finance opens up

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3 Net interest margins, a commonly used measure of bank intermediation efficiency, are structurally higher in Indonesia than many other emerging market economies.

4 More than 98 percent MSMEs are micro enterprises.

5 70 percent of the loans constitute working capital loans and the reming is for investment purposes.

6 The government established the People’s Business Loan (KUR) program in 2007 to enhance access of MSMEs to bank loans through the provision of subsidized, partial credit guarantees covering 70 percent of the loss. Under the program, the government provides interest subsidies to participating banks, allowing them to lend to MSMEs at capped interest rates.

7 SMEs may have less resilience and flexibility in dealing with the costs the COVID-19 shocks entail. Costs for prevention as well as requested changes in work processes, such as the shift to teleworking, may be relatively higher for SMEs given their smaller size, but also, in many instances, the low level of digitalization and difficulties in accessing and adopting technologies.
opportunities for economic and financial inclusion: for instance, it offers a promising channel to overcome Indonesia’s geographical barriers, the most often cited reason for not having a financial account, and promote access to financial services in remote areas where the physical presence of traditional financial institutions is absent. Digital technology also helps overcome other challenges that traditional financial institutions face in extending financial services—such as by lowering the cost of financial services by lowering operational costs and using the digital track record in payments combined with big data analytics to assess borrower creditworthiness to provide quick short-term uncollateralized loans. It also helps increase competition in the financial system, thus contributing to higher efficiency of credit intermediation. Moreover, digital innovation through online commerce encourages business competition, and increases the diversity of services and products that can increase society’s economic participation.

7. Moreover, digitalization has taken on added value during the COVID-19 crisis across the globe. With lockdowns and social distancing, digitalization is already helping Indonesia mitigate the economic fallout—through telework, online consumption, continued access to financial services, while also allowing the government to disburse funds to those most in need.

C. Recent Developments in Indonesia’s Digital Economy

8. Indonesia’s digital landscape—mainly concentrated in e-commerce and in digital financial services (DFSs)—has expanded rapidly in recent years. Technology is transforming Indonesia’s financial sector landscape. First, traditional incumbent financial institutions are adopting new technologies, thus affecting the financial services they offer. Second, technology companies entering the financial services space, i.e., fintech firms, are sometimes competing with, but also increasingly collaborating with traditional incumbent financial institutions. The major clusters of digital financial innovation in Indonesia are digital payments, digital banking and peer-to-peer (P2P) lending. Adoption of digital payments is in turn supporting the rapid growth in e-commerce. As of end-2019, there were more than 200 e-commerce players and more than 350 fintech players.

8 MSMEs are still considered by commercial banks as risky and costly to serve, and often lack access to collateral, and credit history. From the demand side: long processing time for loan application, banks reluctance to provide short-term loans, and lack of financial literacy are the key drivers.
9. **The COVID-19 outbreak has seen Indonesia’s e-commerce sector surge.** Indonesia has witnessed strong growth of online commerce in recent years (Figure 3). From 2017 to August 2019, e-commerce transactions grew by 137 percent (CAGR), and the penetration of e-commerce users, i.e., the share of population that make online purchases, increased to 44 percent in 2019 from 35 percent in 2018 (Statista, Redseer). While total retail sales have declined during the pandemic (with the sharpest decline in May at −20 percent y/y), there has been a shift towards online purchases. For instance, according to a recent study by Bank Indonesia (BI), transactions at the four largest e-commerce sites in the country is estimated to double to US$29 billion in 2020 from US$14 billion in 2019.

10. **Rapid growth in e-commerce is supported by digital payments services, which is an active market for fintech e-money issuers with a few dominant players** (Figure 3). While ATMs and debit cards continue to grow and dominate noncash transaction values and volumes, e-money transaction values are growing rapidly: it increased by 114 percent between 2015 and 2019, while transaction volumes increased by 91.4 percent. Close to one-third of e-commerce purchases are made through the use of mobile and online payment platforms by fintech firms. There is presence of a few key dominant domestic nonbank players in Indonesia’s digital payments market—Gopay, OVO, DANA and LinkAja—which are the most widely used e-money services.

11. **The adoption of digital financial payments has accelerated further during the pandemic.** Despite the slowdown in economic activity, e-money transactions and digital banking transaction values maintained strong growth at 14.3 percent (y/y) and 30.3 percent (y/y), respectively in May 2020 (although they have declined more recently to 14.8 percent and 2 percent, respectively in October 2020). On the other hand, electronic card transaction (debit, credit and ATM cards) values have declined.

12. **E-commerce and digital payments services are evolving into digital lending.** Indonesia’s largest fintech sector is the digital nonbank P2P marketplace lending:⁹ at the end of October 2020, there were 155 registered P2P lending firms (144 firms are conventional and 11 are sharia lenders). Marketplace lenders directly connect lenders to borrowers, do not hold assets on their balance sheet, and add value simply by being the matchmaker and by facilitating risk assessment. P2P lenders in Indonesia are not allowed to provide on-balance sheet loans, to prevent fintech companies from directly competing with existing banks and financing companies.

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with total assets of IDR 3.4 trillion, out of which 36 have been licensed by OJK. In addition, there are 3 licensed equity crowdfunding platforms, and 86 digital financial innovation organizers (IKD). The expansion of “alternative data” generated by the e-commerce and digital payments platforms is being used by these digital lenders to identify creditworthy clients and helping increase access to loans, particularly for those who are not included in the credit registry.

13. **Fintech lending remains small but was growing at a rapid pace prior to the COVID-19 crisis** (Figure 4). The accumulation of P2P loans in Indonesia grew at more than 230 percent (y/y) to IDR 88.4 trillion in January 2020, and total outstanding P2P loans stood at IDR 13.5 trillion in January 2020, with an increase of 137 percent (y/y). The volume of P2P lending remains small, however, at less than 0.1 percent of GDP, hence not having any systemic relevance so far.

14. **The COVID-19 shock has led to a scaling down of new P2P lending by fintech firms in response to weak demand and a focus on preserving liquidity and managing credit risks.** Outstanding P2P credit has declined by 8 percent since December 2019, in line with a decline in overall bank credit growth. This is because much fintech lending has targeted small borrowers, who are likely to be disproportionately affected in the ongoing crisis, and hence may see a sharp rise in credit costs (see Section D).

15. **Digitalization is also advancing in the traditional financial sector, and will likely accelerate further with COVID-19.** Indonesian banks continue to dominate in deposits and lending. Facing competition from the strengthening of fintech’s role in providing payment services, Indonesian banks are increasing their digitalization efforts to raise efficiency, improve service, attract new customers and build loyalty in their existing customers (McKinsey and Company, 2019). Some larger banks have launched digital transformation plans to cater to the shifting of customer preferences towards electronic platforms such as mobile and away from traditional branches, and their increased focus on technology is apparent in their annual reports (see text figure). This trend could be further strengthened as they adopt to lockdowns and social distancing measures to contain the COVID-19 pandemic.

16. **Banks are responding to this competitive pressure by increasingly collaborating with and investing more in fintech.** Indonesian banks and multi-finance companies are increasingly

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10 The promotion of equity crowdfunding in Indonesia has been slow due to low levels of digital financial literacy, and lack of awareness among SMEs, who have not understood what equity crowdfunding entails.

11 IKD operators provide “innovative” financial products and services which represents a new business process or model, activity, enhancement or efficiency which provides value to the digital financial services ecosystem.

12 Current regulations allow traditional brick-and-mortar banks to offer digital products and services, but they do not allow for a completely “virtual/digital bank.”
investing funds in P2P lending platforms, as they look for new distribution channels to connect to MSMEs and reduce costs of credit assessment by outsourcing such activities to fintech platforms. On the other hand, fintech lending platforms are looking to collaborate and partner with traditional financial institutions to gain access to a larger capital base to cater to the demand of borrowers. This is because P2P lending platforms in Indonesia are not allowed to provide on-balance sheet loans, to prevent fintech companies from directly competing with existing banks and financing companies, and hence banks and multi-finance companies have become one of their funding sources.

17. **However, the digital transformation in the banking sector is relatively slow and lags fintech development.** A BI survey (2018) of banks in Indonesia showed that the majority of banks are still at low levels of digitalization (IT development level), and not a single bank had succeeded in adopting biometric verification, blockchain, big data analysis, or artificial intelligence. Legacy systems and lack of technically skilled staff are the main obstacles for banks to transform. For small banks, high investment costs are also an obstacle, leading to a digital divide amongst the large and small banks, where the former (BUKU 4 and 3) are more digitally enabled.

D. **Is Digitalization Helping Fill the Gap in Financial Inclusion and Access to Financing?**

18. **To assess the impact of digitalization in payments on financial inclusion, we use a new measure of digital financial inclusion introduced in Sahay and others (2020).** The “digital” financial inclusion index aggregates financial inclusion facilitated by digital payment services provided through mobile phone and the internet, combining indicators of both access and usage. On the other hand, they also compute a “traditional” financial inclusion index which captures financial inclusion driven by access to and usage of traditional financial services provided by banks (including debit cards). Their sample covers 52 EMDEs and spans the period 2014–17.

19. **Digital financial payment services have led to an increase in Indonesia’s level of financial inclusion in recent years, mainly driven by widespread access to DFSs agents** (Figure 5). Indonesia’s improvement in financial inclusion between 2014–17 is driven by both digital and traditional financial services. The access and usage sub-components of the digital financial inclusion index indicate that increase in digital financial access has played a key role: rapid growth in access to DFSs agents, with over 500,000 agents across the country as of June 2020, high mobile subscription and improvements in internet penetration are the main drivers leading to an increase in digital financial inclusion.

20. **However, the usage of digital financial payments remains considerably lower than in peers, leaving opportunity and room for improvement.** Usage of mobile and internet banking transactions remains low, both in volume and value. Low usage stems from low levels of financial and digital familiarity (two-thirds of the population was financially illiterate as of 2019) and small base of current internet users (see Section E).

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13 For individual investors, participating or lending through a P2P platform can allow them returns of up to 10 percent, substantially higher than the prevailing bank deposit interest rate hovering around 7 percent.
21. At the same time, digital lending, facilitated by fintech, is helping fill the gap in MSME financing (Figure 6). The majority of fintech borrowers are MSME-focused, i.e., extending credit to MSME clients largely for operational use, such as working capital loans, and only a small portion is consumer-focused. Business loans constitute more than 85 percent of total fintech loans.14 Demand for P2P borrowing has increased fourfold between 2018 and 2020: the number of accumulated/active fintech borrowers in September 2020 are at close to 29.2/9.3 million.

22. Fintech lending is complementing the services provided by traditional financial institutions. Regions with higher access to bank loans tend to have higher P2P lending. However, traditional financial institutions focus on big clients and larger collateralized loans of longer duration, whereas the loans provided by fintech companies are mostly small, uncollateralized, of short duration, and to small clients.15, 16 Fintech lenders instead compete directly with informal money lenders, microfinance institutions, and small banks.

23. There is a regional divide in fintech and bank lending activity, which is geographically concentrated in Java. Although the fintech lending sector is growing rapidly, the number of borrowers from outside Java, where the majority of Indonesians live, is considerably smaller than those from Java, with the latter accounting for close to 85 percent of the fintech lending. The uneven growth rates have been attributed to Java’s larger economy, higher financial literacy levels, and inadequate information and communications technology (ICT) infrastructure outside Java (Batunanggar, 2019).

E. Economic Impact of Digitalization—Can Digitalization Support Indonesia’s Post-COVID-19 Recovery?

24. Digitalization has the potential to influence economic outcomes through higher productivity and employment. According to McKinsey and Company (2016), digitalization could expand Indonesia’s economy by 10 percent by 2025 and add 3.7 million jobs, where the economic gain would materialize mostly through a combination of higher productivity and labor inputs. Kinda (2019) finds that firms engaged in e-commerce in Indonesia, are at least 30 percent more productive and export at least 50 percent more on average. A recent study by ADB estimates that improvement in productivity through adoption of digitalization, robotization and artificial intelligence technologies could add an additional accumulated growth of 11 percent of GDP during the period 2020–40 (Asian Development Bank, 2020).

14 Consumer loans have been more prevalent in developed countries with a mature consumer credit market.
15 The average duration of loans from P2P lending platforms span from 10 days to one year.
25. Moreover, it is also associated with higher economic growth through digital financial inclusion (Sahay and others 2020 and Khera and others (2020, forthcoming)) Analysis conducted using data prior to the COVID-19 crisis indicates that an increase in Indonesia’s adoption of digital financial payments to the level in China could raise Indonesia’s real GDP growth rate by 5 percentage points. This is based on an instrumental variable regression approach, which relates the usage of DFSs to average growth over the period 2011–18 using data for 52 emerging and developing economies. To establish causality, access to mobile money agents and access to the internet are used as instrument variables to control for the simultaneity bias and to extract the exogenous components of digital financial usage.\(^{17}\)

26. Thus, digitalization can play a vital role in mitigating the economic impact of the COVID-19 pandemic, and support Indonesia’s recovery. It has provided more resilience by: (i) enabling firms and workers to maintain some operations during the COVID-19 lockdowns; (ii) supporting consumption through online purchases amidst social distancing; (iii) ensuring continued access to financial services, particularly digital payments; (iv) facilitating delivery of government social assistance disbursements; and (v) with decline in credit availability from traditional financial institutions, fintech is providing alternative sources of financing for small businesses and borrowers in some regions.

27. It is also allowing the Indonesian authorities to better track consumer spending patterns in real-time during the current crisis. It is helping inform which sectors are suffering the largest consumption declines and track sectoral shifts. This is helping the authorities to better assess the impact of the pandemic on different sectors and in tracking signs of recovery, while it could also help evaluate where best to target support measures.

F. Key Challenges and Risks—Can Indonesia Safely Seize the Opportunities Brought by Digitalization?

28. There is immense room to improve the enabling factors to fully reap the benefits of digitalization in Indonesia (Figure 7). Indonesia is still not sufficiently digitally enabled to seize the opportunities it presents: it ranks low in the World Economic Forum’s Network Readiness Index, an aggregate measure that aims to capture how well an economy is using ICT technologies. For

\(^{17}\) Control variables include level of economic development, government consumption, foreign direct investment, private credit to GDP ratio, population growth rate and regional dummies.
instance, with less than half of the overall population using the internet, Indonesia has one of the lowest internet penetration rates in the ASEAN region. More than half of the population does not own a smartphone, and two-thirds of the population remains financially and digitally illiterate. Indonesian firms’ digital connectivity—proxied by use of email by firms—also remains low driven by financial constraints, lack of skilled workers, technical uncertainties, resistance to change and the digital infrastructure gaps.

Existing rural–urban digital divides and gaps in key infrastructure are still preventing Indonesia from fully reaping the potential benefits.

29. **As digitalization accelerates during and post COVID-19, risks emerging prior to the pandemic are becoming even more relevant.** Increased use of digital technology leads to increased vulnerability to data and privacy risks, loss of digital connectivity due to natural disasters, cyber-attacks, money laundering and terrorist financing, which may worsen if use of digital means is scaled up in times of crisis. The development of digital lending in Indonesia is already raising concerns about illegal and predatory lending practices, the prevalence of which has risen since the onset of the pandemic. Illegal fintech lenders charge high interest rates, apply high late payment or default fees, and employ aggressive debt collection practices. OJK has closed down close to a thousand illegal P2P lending companies between January-September 2020, operating without a license, adding to a total of 2,840 illegal entities closed since 2018. At the same time, fintech could lead to “excessive” financial inclusion if access to credit grows with insufficient regulation and supervision. These issues are even more relevant during a downturn, as individuals may seek fast access to credit, including digital credit, to meet immediate living expenses.

30. **Risks to financial stability and of greater concentration in fintech and in the traditional financial sector could set back progress made in financial inclusion:**
• Much fintech lending has targeted small MSME borrowers, who are likely to be disproportionately affected in the ongoing crisis, and hence are seeing a sharp deterioration in loan quality. The NPL ratio in the fintech sector has increased sharply from 3.7 percent at end-2019 to 8 percent in July 2020.\(^{18}\) If restructured loans are included, then this ratio is 10 percent.\(^{19}\) In response, fintech firms have retrenched their lending activity more sharply than banks, thereby curtailing access to finance for SMEs and low-income households (Section C). Moreover, the regulatory support measures, implemented as a response to the COVID-19 shock, are designed to be channeled mainly through Indonesia’s banking sector, which could further exacerbate the procyclicality in fintech lending. Major disruptions to services provided by fintech companies could set back the progress that has been made with digital financial inclusion and innovation, and there could also be macroeconomic and financial spillovers.

• In the traditional financial sector, the digital divide amongst the small and large banks is leading to a shift in deposits from the former to the latter due to increased demand for DFSs since the onset of the pandemic. Moreover, smaller banks have less resources and expertise to respond to the competitive pressures they face from fintech companies. If they were to scale back their operations before fintech companies have sufficiently scaled up, the risk of financial exclusion could increase.

31. **Moreover, new forms of exclusion and risks to inequality could emerge.** Lack of access to digital infrastructure (i.e., mobile phones, computers, or the internet) could lead to new forms of exclusion amongst the poor and rural population and widen digital divides. For instance, while the mobile phone ownership is at 81 percent among Indonesia’s higher-income population, it is at 63.5 percent among low-income individuals, and the rural-urban mobile phone ownership divide is close to 12 percent.

G. **Policy Priorities—What Policies Should Indonesia Adopt to Foster Digitalization and Manage Associated Risks?**

32. **Recognizing the potential of digitalization, Indonesian authorities have facilitated its expansion through various regulatory approaches implemented in recent years prior to the pandemic** (Box 1). This includes the implementation of the National Financial Inclusion Strategy (2016), the Indonesia Payments System Blueprint (IPSB) 2025, the digitalization of disbursements of government social assistance programs and transactions of regional governments, and the strengthening of regulation and supervision. Accelerating the digital transformation of the financial

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\(^{18}\) P2P lending platforms have also established their own terms to facilitate borrowers affected by the pandemic. For example, by eliminating late payment fine for borrowers for those businesses impacted by the pandemic.

\(^{19}\) The loan restructuring mechanism works differently in the P2P lending sector in comparison to traditional financial institutions: fintech P2P lending platforms can only facilitate loan restructuring requests from borrowers to lenders and are not authorized to restructure loans, where the authority to grant eased loan payment lies with the lender. Therefore, the lenders, not the platforms, bear the risks for loans in fintech lending. Out of the 1.96 million loan restructuring requests received by 88 P2P lending platforms, only 34 percent of them were granted, with the rest denied by lenders, according to a survey by the Indonesia Fintech Lenders Association. The total amount of reported outstanding loans that were requested to be restructured in May stood at IDR 1.08 trillion (8 percent of total loans), with just IDR 236.9 billion (2 percent of loans) approved by the lenders.
services sector is also one of the targets of the recent 2020–24 OJK financial sector strategic master plan. The government also launched the E-commerce Roadmap (2016) as part of its Economic Policy Package XIV, and has shown strong commitment to adopting the Bali Fintech Agenda (International Monetary Fund, 2018).

33. **Further supportive measures have been implemented during the pandemic to encourage the adoption of digital payments, digital credit as well as digital supervision.** This includes lowering costs/fees on credit cards and funds transfer service fees of BI’s national clearing system (SKNBI) for customers and banks. Incentivizing Indonesia’s MSMEs to adopt the cashless digital payments system, by setting the merchant discount rate (MDR) at 0 percent for transactions using the Indonesian Standard QR Code (QRIS) and has developed non Face-to-Face QRIS. Moreover, OJK has also taken measures to facilitate the move towards digital technology-based regulation and supervision in the banking system.

34. **However, a number of factors still need to fall into place in order to maximize the economic benefits of digitalization, and to avoid the financial exclusion and stability risks in the post-COVID-19 era.** Going forward, policies around digitalization should focus on three broad pillars: (i) ensuring equal opportunity and access for all to avoid a digital divide and rise in inequality (i.e., supply-side constraints); (ii) addressing constraints to its adoption (i.e., demand-side constraints); and (iii) high quality supervision and regulation that strikes the right balance between enabling innovation and competition while addressing risks related to financial stability, integrity, cyber-risk and consumer protection.

   a. **Investing in and expanding access to digital-friendly infrastructure should be prioritized.** This includes both traditional digital friendly infrastructure (including access to reliable electricity and logistics infrastructure for e-commerce related pickups and delivery) and digital ready IT infrastructure (expanding access to quality internet coverage, high speed mobile internet), particularly in rural areas to close the digital divide. There is also a need to expand the reach of DFSs agents through appropriate incentives, as they tend to be concentrated in the areas where access to traditional means (bank branches) is higher.\(^{20}\)

   b. **At the same time, addressing barriers to digital technological adoption across firms in different industries and in the financial services sector should go hand-in-hand.** In addition to digital infrastructure gaps, technology adoption in Indonesia remains low mainly due to a lack of skilled workforce, low financial digital literacy, lack of trust in the digital ecosystem, as well as high cost of implementing digital technologies. Hence, policies should focus on:

   - *Expanding and strengthening the implementation of programs that invest in technology awareness, financial digital literacy and upgrading workers’ skills.* Moreover, encouraging the entry of foreign skilled labor would help fill this gap in the short-run and stimulate innovation.

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\(^{20}\) One of the reasons for this is that being closer to a bank branch makes it easier for DFS agents to manage liquidity ([https://www.cgap.org/blog/bringing-digital-finance-agents-last-mile-indonesia](https://www.cgap.org/blog/bringing-digital-finance-agents-last-mile-indonesia)).
• **Further expanding the reach of G2P will help increase growth in account ownership, including through collaboration with nonbank financial service providers.**

Government assistance received digitally has helped increase account ownership in both rural and urban areas, amongst the poor and helped close the gender gap and the rural-urban divide in account ownership. However, nearly one-third of the recipients of government assistance still do not have accounts. Additional growth in account ownership can be achieved by requiring more recipients to receive government assistance via digital transfers to their own accounts. Moreover, online government services would build consumer confidence in online activities and services over time. At present noncash G2P is only disbursed through state-owned banks, and could be expanded to include fintech service providers to expand the reach of such programs.

• **Building a strong cybersecurity policy and regulations for consumer data privacy and protection** will help strengthen the trust in the digital ecosystem, improve trust in the e-commerce payment platforms and expanded alternative finance options for businesses.

c. **Continuing to strengthen regulation and interagency cooperation to address challenges from cooperative and fintech businesses that have cut across multiple traditional business lines.** There has been a rapid increase in financial products—payment, deposit, lending as well as hybrid products—being offered by unlicensed nonbanks, including cooperatives and fintech companies, that are not currently regulated by either of the regulatory fintech bodies, i.e., OJK and BI. Expanding the regulatory perimeter and closing these gaps in supervision, including through strong interagency coordination between BI and OJK that explicitly encompasses regulating, licensing and supervising fintech activities is important. At the same time, it is important to ensure that the e-commerce and fintech landscape remains sufficiently competitive after the COVID-19 crisis and continues to provide low-cost services.
Box 1. Recent Policy Efforts to Support Integration of the Digital Economy and Finance: Before and During COVID-19

Development of DFSs is embedded in the National Financial Inclusion Strategy (2016). Reforms have allowed e-money issuers (banks and nonbanks) and banks to engage agents to expand service delivery outreach. Agents are now present in all provinces and in 99 percent of the districts; electronification of central government social aid program disbursements and local government financial transactions.

In end-2019, BI formulated the Indonesia Payment System Blueprint 2025 to oversee the digital transformation in both DFSs and in e-commerce, which is built upon the following initiatives: (i) support the integration of digital economy and finance through digital banking transformation and interlink between banks and fintech using open Application Programming Interface (API) standards; (ii) strengthen the configuration of retail payment systems to make it more efficient and safer; (iii) strengthen financial market infrastructures through modernizing the infrastructure and in accordance with international best practices; (iv) establish a public data infrastructure, that will connect all payment transactions and manage the flow of payment data, including digital ID; and (v) strengthen the current regulatory, licensing and supervisory framework on the payment system to improve efficiency, market discipline, integrity, risk management, and consumer protection.

Indonesian regulators have been focusing on striking an appropriate balance between promoting innovation and safeguarding financial stability, more proactively since 2016. While BI is responsible for the regulation of e-money, payment processing and fund transfers in the context of the e-retail and marketplace industries, OJK regulates the P2P lending market and equity crowdfunding market. Regulatory status of “marketplace lending platforms” is the same as nonbank financial institutions. Both BI and OJK have adopted the regulatory sandbox, preceded by mandatory registration of fintech business.

In response to the COVID-19 shock and related containment measures, the authorities introduced measures to encourage the use of digital payments:

- In April 2020, BI relaxed rules on credit cards, reduced the costs of the National Clearing System (SKNBI), and supported electronic disbursements of various government social assistance programs.
- BI has also been pushing Indonesia’s MSMEs to adopt the cashless digital payments system. In August 2019, it introduced the Quick Response Indonesian Standard (QRIS) as the national standard QR code payment in facilitating payment transactions in Indonesia, that allows interoperability and interconnectivity and can be used to support digital payments for MSMEs. More than 5.46 million merchants have adopted the QRIS since it came into effect, amongst which close to 43.6 percent (2.4 million) have joined during the pandemic since March 2020. In April 2020, BI also temporarily reduced the Merchant Discount Rate (MDR) on QRIS to 0 percent for micro-businesses.
- In June 2020, the government launched a digital credit program (DigiKu) for MSMEs under “Proudly Made in Indonesia” movement to facilitate the provision of low-interest loans to MSMEs through digital platforms. This is being channeled through increased collaboration between the government, state-owned banks, and tech-based companies.
- In a move towards digital technology-based regulation and supervision, OJK launched the Online Banking Provisions Information System (SIKEPO) mobile application in September 2020, which is expected to increase compliance and disseminate information on various regulations in the banking sector.

International cooperation and collaboration in payment systems and digital financial innovation are also being strengthened, especially with central banks in ASEAN. In August 2020, a financial technology cooperation agreement was signed between the OJK and the Securities Commission Malaysia (SC Malaysia), to facilitate information exchange between the two institutions, including information on new technology developments and trends and on regulatory aspects. In September 2020, OJK has signed an agreement with Bangko Sentral ng Pilipinas aimed at deepening financial inclusion, information sharing on digital financial innovation, and improving the supervisory framework.

1/ National Financial Inclusion Strategy is a national framework of financial inclusion for encouraging economic growth, accelerating poverty reduction, and reducing inequality between individuals and between regions.
2/ These agents can open new bank accounts, e-money accounts and provide access to cash-in, cash-out, bill payments and transfers services through registered e-money. Some of them can also facilitate the micro loan applications and provide access to other financial services (e.g., micro insurance).
3/ The process of registration is a two-stage process. The first stage is registration with intent to operate. The second stage is licensing, where a company has to prove operational reliability with respect to platform risk mitigation, customer data safety, and fraud detection and prevention. In addition to the second regulation, the authority has set up a sandbox system where registered platforms can go through an operational reliability test to find weaknesses.
Despite progress, close to half the population still remains unbanked…

Figure 1. Financial Inclusion and Access to Formal Credit

…and 6 percent of the world’s unbanked reside in Indonesia.

The majority of middle to lower segment population and MSMEs lack access to finance from traditional FIs...

…which is the most often cited barrier to MSME growth, leading to their low productivity and competitiveness.

Sources:
- Indonesia Financial Inclusion Insights Tracker Survey.
- World Bank Findex.
- IFC, 2013, Indonesia Market Study: Moveable Assets-based Financing to MSMEs.
Figure 2. Impact of COVID-19 Shock on Indonesian MSMEs and Households

A large share of households faced more than a 25 percent decline in income due to the COVID-19 shock...

More than 85 percent of MSMEs reported having no cash/savings or funds that would run out in a month ...

and the share of MSMEs that faced financial difficulty is much larger than peers.

...and despite several new lending schemes, getting credit from banks was limited for most MSMEs.

Source: ADB survey of randomly selected 1,046 households between May-July 2020 and 525 MSMEs between April-May 2020.
With its large youth population, Indonesia is the largest market for e-commerce in ASEAN...

Large share of e-commerce purchases is being made through the use of mobile and online payment platforms...

...and is projected to grow at a rapid pace

...and preference for e-money services provided by fintech is significantly larger and continues to strengthen.

Indonesia’s E-Commerce Supported by Digital Payments

E-commerce Payment Methods, 2019

Bank transfer 29%
Bank card 20%
Cash on delivery 14%
Debit card 7%
Charge & deferred debit card 3%
Others 2%
Digital/mobile wallet 23%

Sources: Statista Digital Market Outlook; and IMF staff estimates.

E-commerce Payment Values and Digital Penetration

Payment values (in trillions of rupiah)
Digital penetration (in percent, right scale)

Sources: Global Data via Statista; and Statista Digital Market Outlook.

Fintech Payment Transactions: Electric Money

Bank Nonbank


Source: Bank Indonesia.
Figure 4. Marketplace Lending: Before and During the COVID-19 Pandemic

The growth in accumulation of outstanding P2P loans grew at more than 230 percent (y/y) to IDR 88.4 trillion in Jan-20.

While fintech lending has been growing at a rapid pace pre-COVID, it still remains very small, at less than 0.1 percent of GDP.

New P2P loan issuances have seen a sharp decline since the onset of the pandemic...

...and decline in P2P lending has happened across most regions.
Figure 5. Digital Financial Inclusion in Payments

Digital financial inclusion has helped increase financial inclusion in recent years. However, there is considerable scope for improvement...

Progress in Financial Inclusion: Traditional vs Digital, 2014-17
(+/- indicates increase/decrease in financial inclusion)

...particularly in the usage of DFSs which remains considerably lower in comparison to other EMEs...

Access vs Usage of Digital Payments, 2017
(0-1, higher number indicates higher financial inclusion)

...owing to low levels of financial digital literacy, and small base of internet users.

Digital Readiness of Unbanked Population
(In percent of adults)

Source: Indonesia Financial Inclusion Insight Tracker; 2018-19.
Majority of the P2P lending is short-term uncollateralized working capital loans to MSMEs... and an increasing number of MSMEs are undertaking P2P loans.

It is also providing alternative sources of investment offering returns much higher than bank deposit rates.

However, both fintech and bank credit are concentrated in the Java region, leading to geographical disparities.

Sources: Cambridge Centre for Alternative Finance and IMF staff estimates.
Figure 7. Indonesia’s Digital Readiness

Although smartphone penetration has increased over the years, it remains low…

Indonesia lags other countries in using digital technologies to boost competitiveness and well-being…

…and internet usage remains much lower than peers.

…and ranks low on e-commerce readiness, including because of bottlenecks in postal and delivery systems.

1/ The B2C E-commerce Index is the simple average of four indicators: (1) the percentage share of individuals in the total population using the Internet; (2) the postal reliability score scaled between 0 and 100; (3) the percentage share of individuals in the total population with a financial account; and (4) an indicator of secure Internet server availability scaled between 0 and 100. The postal reliability score relies on postal statistics and surveys to measure operational efficiency based on factors such as the quality of service performance, including predictability, across all categories of postal delivery services. The share of individuals with an account captures individuals (by themselves or together with someone else) with an account at a bank or another type of financial institution or personally using a mobile money service in the past 12 months.
References


