



MILKEN
INSTITUTE

Framing the Issues: Expanding Digital Financial Inclusion in the Philippines

JOHN SCHELLHASE



ABOUT THE MILKEN INSTITUTE

The Milken Institute is a nonprofit, nonpartisan think tank that helps people build meaningful lives, in which they can experience health and well-being, pursue effective education and gainful employment, and access the resources required to create ever-expanding opportunities for themselves and their broader communities.

ABOUT THE GLOBAL MARKET DEVELOPMENT PRACTICE

The Milken Institute's Global Market Development practice works to catalyze private-sector-led growth and economic prosperity in developing countries and emerging markets. The practice pursues this mission by facilitating informed and coordinated policymaking processes across government institutions, private-sector stakeholders, and civil society, and by training a generation of leaders in central banks, finance ministries, and securities regulators, among other financial institutions.

ABOUT THE ASIA CENTER

Based in Singapore, the Milken Institute Asia Center extends the reach and impact of Milken Institute programs, events, and research to the Asia-Pacific region. It identifies opportunities to leverage the Institute's global network to tackle regional challenges, as well as to integrate the region's perspectives into the development of solutions to persistent global challenges.

©2019 Milken Institute

This work is made available under the terms of the Creative Commons AttributionNonCommercialNoDerivs 3.0 Unported License, available at creativecommons.org/licenses/by-nc-nd/3.0/



CONTENTS

3	Introduction and Overview
5	Expanding—and Redefining—Financial Inclusion
5	The Limits of Counting Bank Accounts
7	Data Inclusion
9	Summary: Expanding—and Redefining—Financial Inclusion
10	Barriers to Expanding Financial Inclusion Through FinTech
10	Infrastructure Issues and the Missing “Philippine Stack”
15	Adoption Barriers
17	Summary: Barriers to Expanding Financial Inclusion Through FinTech
19	“Symbiotic Opportunity?” Collaboration Between Banks and FinTechs
19	The Case for Collaboration
20	Models of Collaboration
22	Frictions
24	Summary: Collaborations Between Banks and FinTechs
26	The Role of Regulators
28	Enabling Activities
32	“Cooperative Oversight”
33	Building—and Using—Public Infrastructure for Digital Payments
35	Summary: The Role of Regulators
35	Conclusion and Recommendations
38	About the Author



FRAMING THE ISSUES:

Expanding Digital Financial Inclusion in the Philippines

John Schellhase

Introduction and Overview

The Philippines appears poised to become a world leader in the use of financial technology, or FinTech, due to several drivers.¹ First, the geography of the Philippines, a nation of over 7,000 islands, demands an alternative to traditional brick-and-mortar banking infrastructure. Second, the population is young and mobile-savvy, with a median age of 25 years old, a mobile subscription rate of over 100 percent, and internet penetration of around two-thirds of the population. Third, the Philippines is one of the fastest growing economies in the world. As a result, this young population is increasingly prosperous, driving the demand for financial services. Fourth, the Philippines has a maturing sector of FinTech startups working across various verticals, including mobile payments, remittances, online lending, and small and medium-sized enterprise financing. Finally, the country's financial sector regulators—the Bangko Sentral ng Pilipinas (BSP) and the Securities and Exchange Commission—are supportive of the growth of FinTech and have taken proactive steps to help develop the industry.

Still, this optimistic appraisal of FinTech's potential in the Philippines runs up against some sobering facts. Around 70 percent of the country's 110 million people are still excluded from formal financial products. At the same time, according to a 2015 baseline study, digital payments accounted for just 1 percent of business payments and 0.3 percent of individual payments in the Philippines. While the use of digital payments has expanded since then, cash remains by far the most commonly used form of payment in the economy.

1 For more on the drivers of FinTech expansion in the Philippines, see John Schellhase and Amos Garcia, "FinTech in the Philippines: Assessing the State of Play," Milken Institute, March 2019.



To understand this divide between FinTech’s promise and the current state of affairs in the Philippines—as well as the steps required to close the gap—the Milken Institute organized a day-long roundtable on March 5, 2019. The roundtable gathered senior government officials from the Philippines, regulators from other Southeast Asian countries, banking sector executives, CEOs of FinTech startups, and experts on financial inclusion at the headquarters of the Asian Development Bank in Manila.²

Divided into five sections, this report summarizes the ideas and recommendations explored by roundtable participants. The first section presents the views of roundtable participants on the need to expand the definition of financial inclusion beyond merely holding an account, as well as their thoughts on FinTech’s unique potential to actualize a more holistic form of financial inclusion. The second section identifies the various barriers to expanding digital financial inclusion, including the obstacles to consumer adoption and gaps in the physical and policy infrastructure that must be addressed to deploy FinTech solutions. The third section looks at the potential for partnerships between FinTech startups and traditional banks as a means of overcoming some of these barriers but also lays out some of the frictions that slow down these collaborations. The fourth section examines the role of government and captures roundtable participants’ views on the enabling activities regulators can undertake to expand FinTech-enabled financial inclusion. Finally, the report concludes with a synthesis of the main ideas and recommendations that emerged from the roundtable discussion.

Governor Nestor Aldave Espenilla, Jr. (1958-2019)

Nestor A. Espenilla, Jr., governor of the Bangko Sentral ng Pilipinas, passed away in late February 2019, just days before the roundtable summarized in this paper took place. He lived an exceptional life of public service, defined by a career at the BSP that spanned four decades. As various roundtable participants observed, Governor Espenilla’s commitment to financial sector development and financial inclusion continue to benefit the lives of millions of Filipinos. On behalf of the Milken Institute, the author wishes to express his sympathies to the late governor’s family, friends, and BSP colleagues.

² To encourage a candid exchange of ideas, the discussion was held under the “Chatham House rule.” The essence of this format is that participants are free to share the information and ideas presented during the roundtable with external audiences. However, participants may not attribute any quotes, information, or ideas to any particular individual or institution by name.



Expanding—and Redefining—Financial Inclusion

The roundtable discussion began by questioning what the phrase “financial inclusion” means. There were two currents of this discussion. First, there was widespread consensus that bank accounts per capita was an insufficient measure of financial inclusion. The term, roundtable participants argued, must have a broader meaning and must include some measure of individuals using financial products to improve their lives. Second, roundtable participants suggested a new framing for financial inclusion, which was captured by the term “data inclusion.” By this phrase, roundtable participants were primarily referring to non-traditional, tech-enabled data collection as a basis for credit assessment, but the implications of this concept extend beyond access to credit. This section explores both of these currents in further detail.

THE LIMITS OF COUNTING BANK ACCOUNTS

Roundtable participants first discussed the issue of financial inclusion globally. Traditionally, the primary goal of financial inclusion has been to increase the number of bank accounts held by citizens so they can hold savings and send and receive payments. Based on this measure, as one roundtable participant noted, the global state of financial inclusion has improved dramatically over the last decade, with over a billion people gaining access to formal financial services for the first time. According to the Global Findex, a World Bank database on financial inclusion, the number of financially excluded adults has fallen from 2.5 billion people in 2011 to 1.8 billion in 2017, even as the global population has increased significantly over the same period.³ As impressive as recent progress has been, however, these numbers also underline the fact that many hundreds of millions of people still lack access to a formal account.⁴

In the Philippines in particular, financial inclusion remains a pressing challenge. Only 34 percent of Filipino adults have a formal financial account, according to the Findex.⁵ This is low, even compared to regional peers. In Indonesia, for example, 49 percent of adults have a formal account, and in Thailand, where the government made a significant push for inclusion, 82 percent of adults are account holders.

3 These financial inclusion figures refer to the indicator “Account ownership at a financial institution or with a mobile-money-service provider (% of population ages 15+),” from Demirguc-Kunt et al., 2018, Global Financial Inclusion Database, World Bank.

4 As one roundtable participant pointed out, most recent progress has occurred in China and India.

5 According to the BSP’s own “Financial Inclusion Survey,” 77 percent of the adult population in the Philippines did not have a formal financial account of any kind in 2017.



Given the current state of formal financial inclusion in the Philippines, there was widespread consensus at the roundtable that increasing access to finance should be a public policy priority. However, several roundtable participants emphasized that increasing account ownership—while important—was an inadequate aspiration for the Philippines. There were two reasons for this conclusion.

First, according to several participants, having an account—whether it is a traditional bank account or a mobile wallet—cannot be the end goal. It must be seen as a means to an end. As one participant provocatively said, “Nobody cares about a bank account.” Echoing this view, another person added, “What people care about are financial services that address their needs. They may not need a savings account. They may not need a payments instrument.” What they may need, this participant and others said, are financial products that help mitigate risks and reduce losses during unexpected events such as a health emergency or a flood. In other circumstances, participants added, they may need access to credit to make an investment in their small business at a crucial moment of opportunity.

Second, the traditional measure of access to a bank account may miss a significant amount of financial behavior, according to several roundtable participants. One participant argued that within the “cash-based ecosystem of daily Philippine life, rich and complex financial behavior is commonplace.” This behavior includes predictable purchasing patterns, predictable cash flows, and the extensive use of informal credit arrangements. For instance, the owners of sari-sari stores—the small micro-businesses throughout the Philippines that sell goods such as shampoo packets and mobile phone airtime—frequently extend credit to their customers and make purchases on credit from their suppliers.

Given both the need to expand access to various kinds of financial products and to capture current informal financial activity in a formal way, FinTech is likely to become increasingly important to financial inclusion, according to roundtable participants. First, FinTech firms and FinTech-savvy banks—through their convenient, well-designed mobile interfaces, their ability to iterate products rapidly based on user feedback, and their advanced application of data analytics and artificial intelligence—can potentially provide a customized suite of financial products that help individuals meet their personal objectives.⁶ Second, several participants argued, the technology required to capture informal financial activity formally and to assess creditworthiness through non-traditional measures is now readily available. This second point led to a discussion of “data inclusion.”

6 As one roundtable participant said, “Customers are now looking to be treated as a market segment of one.”



DATA INCLUSION

The use of data is and has always been essential for access to financial services, including access to credit.⁷ Reliable information about a borrower's income, debt obligations, and past repayment performance are fundamental components of traditional credit assessment. The reverse, as roundtable participants emphasized, is also true: a lack of these data can result in financial exclusion.

In the Philippines, there may be widespread financial activity occurring within the cash-based ecosystem, as described above, but because these short-term loans occur informally and repayment happens in cash, this activity does not produce recorded data. As a result, even an extensive history of financial behavior cannot serve as the basis of a credit decision made by a bank or other formal financial institution. What is needed, one roundtable participant argued, is a way to capture and leverage the information generated by daily activities as the foundation for accessing formal financial products. This is the essence of "data inclusion."

For many FinTech firms, the process of collecting, analyzing, and making a credit decision based on non-traditional data is the definition of their business model. One participant from the Philippine FinTech sector explained, "Instead of asking a person to produce financial data that she cannot produce, we look at alternative data, particularly mobile data." According to this participant, the daily usage of mobile phones—to buy airtime, play games, post to social media, and use the internet—provides enough data to understand the user's repayment capacity. "We can actually credit score any person with a mobile phone today," he said, "and from there we can instantly make a real-time credit decision and deploy our credit product in under 10 minutes."

This approach means previously unbanked individuals will have access to formal credit for the first time. Importantly, access to these FinTech products also creates a track record of data that can open up access to traditional financing. To explain this point, one participant pointed to the ride-hailing app Grab, which has recently introduced the payments platform GrabPay.⁸ "Prior to using GrabPay," this participant said, "users were totally invisible to the banks." Using digital payments creates a financial profile of the individual that can support access to credit and insurance

7 This section focuses on credit, but the use of data is a foundation of the financial services industry and financial markets. As one roundtable participant said of the insurance sector, "Actuaries are the original data scientists."

8 As another practical example of the importance of "data inclusion," one participant pointed to the middle-class workers at call centers, a major part of the services industry in the Philippines. This participant said, "Call center employees earn enough that they can pay for monthly rentals and even possibly mortgages," but they are excluded from home ownership "because they don't have a banking history."



products, delivered through Grab's platform or from other financial services providers. In other words, perhaps ironically, FinTech-enabled financial inclusion can be seen as a prerequisite for traditional access to bank financing. As discussed below, though, several participants questioned this conclusion.

A similar dynamic is at play when it comes to access to credit for small and medium-sized enterprises (SMEs). In the Philippines, less than 20 percent of SMEs received a bank loan in the last two years, according to research from the Asian Institute of Management, and the country has one of the highest loan rejection rates for businesses in the region. Only 4.5 percent of Philippine small businesses have used a bank loan to finance investments, compared to an average of 16.1 percent across the East Asia and Pacific region.⁹

Several roundtable participants argued that increased "data inclusion" could help improve a number of these indicators. Instead of using smartphone data, though, roundtable participants pointed to the SMEs' relationships with larger corporations in the supply chain as a critical point of leverage for increasing "data inclusion" and, thereby, financial access for SMEs. This relationship can go two ways, as small businesses can be buyers from large corporations or suppliers to them.

First, small retailers, including the tens of thousands of sari-sari stores throughout the Philippines, buy their products wholesale from large multinational corporations such as Procter & Gamble and Unilever. These corporations have sight-line data for these businesses, meaning "they know exactly how much of their products are sold by their distributors at each individual shop," as one participant explained. These data can serve as a proxy for the cash flows of SMEs and, therefore, as the basis of a credit decision from a bank.

To illustrate this idea, the same participant pointed to a study conducted by the MasterCard Foundation with Unilever in Kenya, which found commercial banks would be willing to lend to micro-retailers without requiring physical collateral if given access to credible weekly sales data from a multinational supplier. Businesses that accepted these loans saw their sales increase by 26 percent on average, according to information shared at the roundtable. The participant who raised this example spoke in terms that reflected the discussion of "data inclusion" for individuals. "These loans," she said, "are the stepping stone or gateway for them to have a formal credit history with a financial institution." Another participant commented, "That lenders might care more about data on customers than they would about having actual physical collateral seems potentially transformative."

9 See Maribel Daño-Luna, Tristan Canare, and Jamil Paolo Francisco, "Drivers of Philippine SME Competitiveness: Results of the 2018 SME Survey," Rizalino S. Navarro Policy Center for Competitiveness at the Asian Institute of Management, Working Paper Series 2018-003 (November 2018), and also "Philippines Country Profile," Enterprise Surveys (The World Bank, 2015).



From the other direction, those SMEs that act as suppliers to large corporations should also be able to leverage these invoices to expand their access to finance. As one participant explained, invoice discounting transfers the credit risk from the SMEs to the larger firms, so banks are not assessing the ability of an SME to repay a loan but the ability of a large corporation to pay its bills. When this is the case, “it becomes easier to deploy money,” this participant said, but he added that the challenge is to provide “visibility” into these relationships between suppliers and buyers. As a possible model for the Philippines, he pointed to a rule in India that requires companies above a certain size “to list all of their suppliers’ receivables in a registry, a sort of a marketplace, which becomes visible to financial institutions for them to discount.” Such a system, he argued, would increase access to finance for smaller firms by providing “an infrastructure to transfer the credit risk away from the SMEs and to larger companies.”¹⁰

SUMMARY: EXPANDING—AND REDEFINING—FINANCIAL INCLUSION

In summary, the roundtable discussion concluded that an individual could have a bank account but still lack financial inclusion. On the other hand, she can attain financial inclusion without having a bank account. Roundtable participants generally agreed on this formulation, arguing that inclusion must mean access to various products that help users meet their personalized needs and participate in the growth of the economy.

At the same time, several participants put forward a new way of framing financial access through a discussion of “data inclusion.” They talked about non-traditional, tech-enabled data collection as a means of expanding financial inclusion to unbanked individuals and underserved SMEs. Additionally, they argued, FinTech-enabled lending to unbanked individuals could serve as a prerequisite for accessing traditional financial services. This is the fundamental promise of FinTech to expand financial inclusion. However, there are complications. As the next section details, roundtable participants identified several barriers that currently prevent access to and adoption of FinTech products.

¹⁰ Several FinTech players are actively working to expand the use of invoice financing in the Philippines through online platforms. According to the roundtable discussion, one of the major challenges these firms face is that they lack an insurance backstop to protect investors. This is the case despite their best efforts to “work with potential insurance partners to help them understand the opportunity,” according to one roundtable participant. This same participant pointed out that the banks have the Philippine Deposit Insurance Corporation (PDIC) to protect their depositors, while credit cooperatives and microfinancing schemes run by nongovernmental organizations have access to the BSP’s credit guarantee program, the Credit Surety Fund. However, he concluded, even as “volumes of online financing continue to increase year over year,” no such safeguard is available to online lenders.



Barriers to Expanding Financial Inclusion Through FinTech

The barriers to expanding financial inclusion through FinTech identified during the roundtable discussion fall into two broad categories. First, there are barriers that impede FinTech firms and other financial institutions—including banks—from deploying and disseminating digital products. These barriers can be classified as issues with infrastructure, broadly defined to include both the underdeveloped physical infrastructure and a missing technological and policy infrastructure that might be called the “Philippine Stack.” The second category encompasses the variety of reasons consumers are reluctant or unable to make use of FinTech products in their lives. These barriers could be referred to as issues of adoption.

INFRASTRUCTURE ISSUES AND THE MISSING “PHILIPPINE STACK”

When asked what obstacles impede the expansion of the Philippine FinTech industry, one participant replied, “Number one, infrastructure.” This was a view shared by many around the table, and throughout the discussion, participants identified gaps in the physical infrastructure required for inclusion, as well as shortcomings in national frameworks and policies that would enable “data inclusion.”

In terms of “hard infrastructure,” as one participant called it, there are two main shortcomings: poor mobile connectivity in rural communities and the lack of physical bank branches. As for the first, many Filipinos are cut off from digital services due to slow, unreliable, or non-existent mobile connectivity. Since most consumer-facing FinTech products are delivered via a mobile app, poor connectivity effectively excludes communities outside of major urban centers from using these products. At the same time, rural communities are also often cut off from “brick-and-mortar” financial infrastructure—that is, the traditional access points for formal financial services such as bank branches, ATMs, and cash agents for remittance companies.¹¹ As discussed below, a lack of access to traditional accounts can be an important barrier to accessing FinTech services because holding a traditional account is a common prerequisite to getting cash in and out of digital wallets and other digital platforms. As a result of both of these factors—poor mobile and financial infrastructure—FinTech adoption has occurred almost exclusively in Philippine cities and has left Filipinos in rural areas behind.



In addition to the problems with the physical infrastructure, a large number of roundtable participants argued for the need to invest in what might be called the “Philippine Stack.” The term refers to an architecture of policy frameworks, biometric national identity enrollment, and open application programming interfaces (APIs) developed by government to facilitate participation in the electronic services economy, including FinTech. The model for this type of comprehensive approach is India, where the government began building the “India Stack” in 2009. Box A below provides further information on the India Stack, including a description of its foundational feature: the Aadhaar national ID, which combines demographic and biometric information.

Roundtable participants discussed four fundamental features of the “Philippine Stack” they hoped to see their government develop. Foremost among these features was a digital-ready national ID, which would serve as the foundation for the other three: an efficient electronic Know-Your-Customer (e-KYC) process, access to national records via open APIs, and a “consent architecture.”

As emphasized repeatedly by multiple roundtable participants, the top priority for building a digital architecture to enable FinTech penetration is a digital-ready, national ID. As these participants explained, the lack of a national ID undermines the potential for data inclusion because it limits the kind of data that can be linked to a specific individual and so reduces the accuracy of the dynamic credit scoring process described above. A national ID, roundtable participants argued, is also a prerequisite for e-KYC and the expanded use of APIs.

A number of participants emphasized that national ID enrollment is not enough but that the national ID program needed to be built to facilitate the expansion of the digital economy. To this end, roundtable participants raised concerns about the rollout of the Philippine Identification System (PhilSys), a national registration and ID issuance program scheduled to be fully in place by 2022 (see Table 1 below). “It appears to be headed toward a more traditional card-based system,” one said. Another added, “We need to make sure that the national ID contains a digital national ID as well.” Several argued that, at a minimum, this requires the PhilSys ID to include biometric data, but it will also mean that the government proactively develops data standardization and storage procedures so permissioned external parties are able to access the PhilSys platform.

11 According to one participant, one of the factors that has slowed the expansion of bank branches and other traditional financial services in the Philippines has been ongoing violence and political instability. This is especially the case in Mindanao, the large island in the southern Philippines, which has suffered from a long-term conflict between the government of the Philippines and various rebel groups.



Table 1. Implementation Plan for the Philippine Identification System

Phase 1 January to December 2019	Procurement, testing of core technology infrastructure, organizational development of the PhilSys Registry Office, and launch of target registration
Phase 2 January to June 2020	The development and full operationalization of core technology infrastructure, development of a mass registration ecosystem, use case development, and registration of pre-registered persons
Phase 3 July 2020 to June 2022	Mass registration of 110 million Filipinos and resident aliens, including Overseas Filipino Workers
Phase 4 July 2022 to December 2022	Initiating the process of issuing of PhilSys Numbers, or PSNs, to newborns

Adopted from "Gov't on Track with National ID Implementation," neda.gov.ph

The second key feature of the "Philippine Stack," according to several participants, is a fast, accurate, and secure e-KYC compliance system, which would dramatically lower the cost of onboarding new account holders and FinTech app users while ensuring compliance with international standards designed to impede money laundering and other forms of fraud. One participant called e-KYC "the starting point for digital finance and e-commerce." Another went further, arguing that in a digital economy, e-KYC should be viewed as a public good. This participant called for the central bank to build and maintain an e-KYC platform available as a public utility for the use of all financial services providers.¹²

¹² Given the current lack of a national ID in the Philippines, a couple of participants suggested two possible workarounds to enable more efficient e-KYC processes in the short term. One mentioned that his company's mobile wallet is already using "a facial recognition tool with a liveness check and anti-spoofing to make our e-KYC much more secure, but, more importantly, more convenient." Another participant pointed to the Mobile Number Portability Act, which was signed into law in February 2019. The law requires telecommunications companies to allow subscribers to keep their cell phone numbers throughout their lifetime, even if they switch providers. This participant's suggestion was that a permanent cell phone number could also act as an additional, verifiable form of identification to facilitate e-KYC even as the national ID system is being built.



Box A. The India Stack

The India Stack, which is composed of four “layers” as shown in the table below, was designed to bring hundreds of millions of people into the digital economy by reducing onboarding frictions and enabling the delivery of digital services at scale. The importance of the India Stack for financial inclusion has at least two major components. First, it dramatically reduces the costs and time involved in opening an account, mainly by making it easier for banks to comply with KYC regulatory requirements. Second, it introduces a unified digital payments system that enables seamless interaction between bank accounts and digital wallets.

The Layers of the India Stack

Layer	Description	Key Component(s)
<i>Consent layer</i>	Consent architecture allows data to move freely and securely to democratize the market for data.	Open personal data storage
<i>Cashless layer</i>	A single interface to all the country's bank accounts and wallets to democratize payments.	Immediate Payment Service, Aadhaar Enabled Payment System, Aadhaar Payment Bridge, Unified Payments Interface
<i>Paperless layer</i>	Digital records move with an individual's digital identity, eliminating the need for a massive amount of paper collection and storage.	Aadhaar e-KYC, E-sign, Digital Locker
<i>Presenceless layer</i>	A universal biometric digital identity allows people to participate in any service from anywhere in the country.	Aadhaar

Adapted from indiastack.org

The foundation of the India Stack is the Aadhaar unique identity enrollment program. Aadhaar is a unique 12-digit number issued to Indian citizens or residents after verification of their identity through the collection of demographic (name, date of birth, age, gender, address, etc.) and biometric information (fingerprints, an iris scan, and a facial scan or photograph). As the Unique Identification Authority of India (UIDAI) explains, “[The] Aadhaar number is verifiable in an online, cost-effective way. It is unique and robust enough to eliminate duplicates and fake identities and may be used as a basis/primary identifier to roll out several government welfare schemes and programmes for effective service delivery, thereby promoting transparency and good governance.”¹⁵

¹⁵ “What is Aadhaar,” UIDAI, accessed April 15, 2019, <https://uidai.gov.in/my-aadhaar/about-your-aadhaar.html>.



An efficient e-KYC process, one participant argued, is as important to SME finance as to consumer products. When financial institutions evaluate the creditworthiness of SMEs, this participant explained, “there is always a trust issue.” He said that, as with consumers, “the problem with SMEs is also KYC. It’s hard to identify the authenticity of a small business.” As a possible solution, this participant recommended the Securities and Exchange Commission or the Department of Trade and Industry publish an open API that would allow FinTech firms to verify the registration of businesses in real time. Such a system, he argued, would increase trust and reduce transaction time for businesses and their lenders.¹³

As a third key feature, several roundtable participants argued that the PhilSys platform must be built in such a way that national databases can be accessible through the use of open APIs, as Aadhaar data are in India. APIs allow programmers to build applications that can easily and securely interact with data collected and stored by another organization—in this case, the data held by the Philippine government that will be linked to each Filipino’s unique ID.

As a final feature of the “Philippine Stack,” a few roundtable participants insisted the overall framework should allow citizens to consent to the collection and use of their data. To this end, one participant called for a “self-sovereign” national ID. Such an ID would empower citizens to choose which data, both financial and non-financial, they wished to share in order to access various services provided by both the government and the private sector.¹⁴ Several participants agreed, arguing that unless consumers had a certain control over how their data were stored and shared, the expanding use of open APIs for government data could introduce controversial issues of privacy, corrode public trust, and delegitimize the system.

13 One participant remarked that, often, SMEs themselves resist efforts to switch to digital payments because digital transactions provide greater transparency into their cash flows. The problem, he explained, is the tax burden. If SMEs continue to transact in cash, there is not necessarily a record of their actual revenues. As this same participant said, “No matter how good the product that anyone brings forward to them, no matter how many problems it solves, it comes with an additional percentage of money that they need to now give to the government.”

14 Additionally, this participant argued that consumers should have a say in how their data are monetized. “Who owns the data?” he asked. “It should be me. I should be able to access it. I should be able to grant access to the parts that are relevant to get the services that I want.” On this point, another participant added, “There is also a play to add non-financial data, to build a centralized system which codifies, classifies, then gives the right to a citizen to share the data. This will make for a more interoperable opportunity as finance is no more a standalone component; instead, it would be blended into the whole ecosystem in a seamless way.”



ADOPTION BARRIERS

Setting in place the right physical and technological infrastructure may be a necessary but insufficient condition for increasing financial inclusion through FinTech, one participant said.

Participants identified four kinds of barriers that affect the demand for FinTech products and slow their adoption in the Philippines: awareness, trust, prior financial inclusion, and convenience or ease of use.

At the most fundamental level, as a few roundtable participants pointed out, the adoption of FinTech products in the Philippines has remained low because many consumers are simply unaware of the digital option. Cash dominates the economy. Even among Filipinos with bank accounts, around 20 percent do not know they can use those accounts to make transfers, as one participant pointed out, referring to the BSP's most recent Financial Inclusion Survey.¹⁶ The use of digital payments may be growing in the Philippines, but millions of Filipinos remain unaware of FinTech products.

The next three barriers—trust, a lack of formal financial inclusion, and convenience—are interrelated in the ways they affect adoption.

As for trust, even if consumers are aware of digital financial products, they may not feel comfortable sharing their financial data online or on a mobile app. As one participant said, “Consumers need to feel confident about disclosing personal details to fully participate in the online economy.”¹⁷ In part, a lack of trust in FinTech products is related to misgivings about the physical infrastructure, as discussed above. “One reason why consumers prefer to pay in cash is a trust issue,” one roundtable participant explained. “They're not sure that what they purchase online will actually arrive.” Another aspect of digital distrust in the Philippines is related to cybersecurity. There have been several high-profile cybercrimes recently in the country, including the 2016 theft of voter registration data that included millions of citizens' fingerprints.¹⁸

¹⁶ “Financial Inclusion Survey” (BSP, 2017).

¹⁷ According to some roundtable participants, a well-designed and highly secure “consent architecture,” as discussed above, is one potential way of increasing trust in digital products.

¹⁸ See, for example, James Temperton, “The Philippines election hack is ‘freaking huge,’” in *Wired*, April 14, 2016.



Trust is integrally connected to another adoption barrier: a lack of formal financial inclusion. As one participant from the banking sector explained in regards to the 70 percent of Filipinos without a bank account, “We have tried to convert them to mobile. But we can’t. There is an interim step. They have to move from being financially excluded to being financially included before they move to digital. We’re missing that middle point, that middle ground, and that middle ground has a lot to do with trust.”

In addition to building trust, there are two other reasons why prior financial inclusion is important, according to the roundtable discussion. First, it increases financial literacy, which facilitates the adoption of digital payments and FinTech lending products by increasing both trust in these products and users’ understanding of how they work. Second, many digital platforms require some formal account to get cash into or out of the platform.

Responding to the declaration that “nobody cares about a bank account,” one participant said, “It’s not easy to load cash into your mobile phone unless you have a bank account.” She added, “The problem becomes circular,” because traditional financial inclusion becomes a prerequisite for digital financial inclusion—not the other way around, as suggested above. Another participant from a large international online payments company echoed this view, saying, “One of the biggest challenges that we face when we go into a new market is how to get connected into the banking infrastructure in order to accomplish the effective movement of money, funds in and funds out.” He pointed to the “hundreds of thousands of freelancers in the Philippines today on global freelancing platforms” who can receive secure digital payments but often have trouble cashing out of digital platforms and spending the money they have earned.

As the example of Filipino freelancers indicates, sometimes mobile money is simply not as convenient as cash. This is the final adoption barrier roundtable participants discussed: ease of use. The main problem is two-fold. First, if a traditional account is required to get money into or out of a digital platform, adopting a FinTech product for the unbanked also means going through all the procedures and paperwork of establishing a traditional account. Even for Filipinos with traditional bank accounts and especially those in rural communities, depositing or withdrawing funds may require a time-consuming trip to the nearest bank branch or ATM. This problem would be solved, some roundtable participants suggested, if there were a wider e-commerce marketplace that accepted digital payments. But—and this is the second part of the problem—this is not the case currently in the Philippines. As one participant said, “If they can’t spend it, then what is the point of having it?” Another participant, though, was optimistic that new spending avenues were opening up. “I see this as a transition period,” he said. “Once the scenarios for people to use their digital wallets or bank accounts or credit cards in the retail outlets become digitized,



there will not be a need for them to convert into cash,” and then FinTech adoption will accelerate.

Finally, as an additional aspect of the convenience or efficacy of digital payments and digital financial products, one participant raised the issue of income levels. “If I will earn today what I will use tonight, there’s no sense putting it in a card,” he argued. “It’s not a good value proposition. So I think we need a little more understanding of who we are trying to address.” His point was that for many Filipinos the use of cash remains not only convenient but also an essential strategy to navigate the economics of daily life, despite the inefficiencies of cash versus digital payments on a macro scale. FinTech solutions that do not account for that reality will continue to run up against resistance when targeting the tens of millions of low-income Filipinos at the bottom of the economic pyramid.

SUMMARY: BARRIERS TO EXPANDING FINANCIAL INCLUSION THROUGH FINTECH

Roundtable participants agreed infrastructure and adoption barriers impede FinTech’s potential to expand financial inclusion. Infrastructure barriers include limited mobile coverage and the lack of traditional access points to deposit and withdraw cash from formal accounts. Both of these problems particularly affect rural communities. In addition to the build-out of physical infrastructure, several participants called for a new data and policy infrastructure that might be called the “Philippine Stack.” This framework for expanding the digital economy would rest on the foundation of a national ID and should, participants argued, be designed to facilitate e-KYC, allow data access by external parties via open APIs, and include a “consent architecture” that enables Filipinos to control the use of their data. Adoption barriers included a lack of awareness about FinTech products and the interrelated issues of trust, prior financial inclusion, and the convenience of FinTech products in the cash-dominated environment of the Philippine economy.

In addition to identifying the obstacles, roundtable participants worked to pinpoint potential solutions. Several participants pointed to Grab, a ride-hailing application with around 70 million users throughout Southeast Asia, which has entered into the digital payments space through its GrabPay platform. Box B below summarizes the discussion of how GrabPay has addressed the adoption barriers of awareness, trust, financial inclusion, and convenience. A number of participants also raised the possibility that the future of financial inclusion may, ironically, ultimately be driven by the old vanguards of financial access—commercial banks. This possibility is discussed further in the next section.



Box B. Lessons from GrabPay's Experience in Overcoming Adoption Barriers

According to several roundtable participants, GrabPay's experience demonstrates how the four adoption barriers identified at the roundtable—a lack of awareness, trust, prior financial inclusion, and convenience—might be overcome.

The reason, as one roundtable participant said, is that Grab “went in through the side door.” By this, she meant that Grab started by offering a non-financial digital service, specifically an app that linked smartphone users to drivers. Importantly, they allowed customers to pay for that service in cash. Since the payment was handled in cash, none of the barriers to digital product adoption applied. After Grab had built its user base, the company was able to use the app to expand awareness—overcoming the first barrier—about the option to use Grab's own GrabPay wallet to pay for rides. The users' experience with the ride-hailing app also provided a basis for overcoming the second barrier of trust because users already trusted the app to deliver a quality service.

Grab overcame the related barriers of a lack of prior financial inclusion and ease of use by allowing cash to digital “top-ups” of the GrabPay wallet to be made through exchanges of cash with the driver or at the 3,000 or so 7-Eleven convenience stores in the Philippines.¹⁹ This means GrabPay users do not need to have access to any other formal financial account to get funds into or out of their digital wallet. Additionally, Grab has worked to provide “more avenues to spend” digitally so that having funds in the wallet is as convenient as cash for certain products. Eventually, this could mean users could purchase additional financial products, such as insurance, through the app.

The result of this approach has been that, over the last year, according to information shared at the roundtable, Grab has seen the number of users using GrabPay to pay for rides increase from about 1 in 10 to about 1 in 4. “That means,” one participant noted, “they have now become part of the digital payment ecosystem.” As a result, users' ability to access other financial services also increases.

¹⁹ See Louise Maureen Simeon, “7-Eleven targets 3,000 stores by 2019,” *The Philippine Star*, July 20, 2018.



“Symbiotic Opportunity?” Collaboration Between Banks and FinTechs

Several participants discussed the potential for a “symbiotic convergence” of FinTech startups and traditional banks, to borrow one person’s phrase, as a viable path toward expanding financial inclusion in the Philippines. During the discussion of this possibility, participants built what might be called a “case for collaboration.” They also laid out possible models of how banks might effectively partner with FinTechs and identified several frictions that slow down the process of integrating FinTechs into banking operations.

THE CASE FOR COLLABORATION

According to one roundtable participant, the view that FinTech startups and traditional banks are competitors has become “outdated.” Banks and FinTechs, he argued, have distinct and complementary approaches to solving problems and responding to market demands. FinTechs, for example, have access to the best tech talent, as well as “the ability to push the boundary in iterative, A/B testing, learning from small experiments, and succeeding,” this participant explained. Banks, on the other hand, benefit from their trusted brands, large balance sheets, ability to operate at scale, and rigorous compliance departments. Given these different “centers of gravity,” as one participant phrased it, FinTechs and banks ought to be able to find mutually beneficial areas of partnership.

From the perspective of the banks, this opportunity for partnership has become all the more urgent, according to several roundtable participants, due to two emerging threats: changing consumer expectations and the rise of “TechFins.”

As for the first of these, roundtable participants appeared to agree consumers are demanding more convenience and a better user experience from their banks. As one participant explained, slightly tongue in cheek, consumers “have been spoiled.” He explained that using digital platforms such as Netflix and Amazon have shaped their expectations. “At a minimum,” he argued, “[consumers] require 24/7 availability, Six Sigma reliability,²⁰ real-time transactions that are safe and secure and cheap, maybe even zero for certain transactions.” They also expect to be treated as a “market segment of one,” the same participant said, with products individually tailored to their context and needs as seamlessly as Netflix’s “Top Picks” suggestions. Building a digital banking platform that meets these expectations requires significant investments in data science, artificial intelligence, and other “emerging technologies

²⁰ Six Sigma reliability was a concept introduced in the 1980s by Motorola, with the standard being that the manufacturing of each component part of a product would be defect-free 99.99966 percent of the time. Applied to consumer expectations, Six Sigma reliability would mean that digital products work as they are expected to 99.99966 percent of the time.



that are evolving so fast that it is impossible for banks to keep up,” this participant argued. Since banks are not able to rapidly develop and constantly update the needed technology in-house, they have to look for partnerships with FinTechs.²¹

The urgency to become more responsive to consumer expectations is further heightened by the second emerging threat to the market share of traditional banks: the TechFins. These companies are technology platforms, such as Grab or Alibaba, which developed massive user bases online and are now leveraging them to move laterally into digital payments and financial services. As one participant from the banking sector explained, “The real challenge for us will be the tech companies,” because they combine under one roof the advantages of the small FinTechs (tech talent and innovative capacity) and those of the banks (large balance sheets, brand and marketing power, and the ability to operate at scale). Given these advantages, their expansion into financial services could pose a serious threat to traditional banks that do not find a way to collaborate with technology partners.

MODELS OF COLLABORATION

Given this case for collaboration, roundtable participants turned to identifying viable models for bank-FinTech partnerships. This question, however, did not generate the same level of consensus as other roundtable topics. To the contrary, the discussion suggested many commercial banks are still grappling with the best way to collaborate with smaller FinTech firms. Several frictions, as described below, continue to affect how well banks are able to integrate FinTech products and services.

Perhaps the most comprehensive approach to integration discussed at the roundtable was UnionBank’s funnel model. As described by one participant, UnionBank, a large commercial bank in the Philippines, integrates FinTech firms into their product offerings and operations through a funneling process that includes the following steps: first, banking the firm; second, providing permissioned access to customer data; third, making equity investments in the firm; and fourth, fully integrating the FinTech’s product into the bank. According to this same participant, UnionBank currently has about 100 FinTechs in its funnel “at various stages of development,” but the last step of full integration remains the most difficult because of some of the cultural frictions discussed below.

One motivation behind UnionBank’s approach, according to the roundtable discussion, has been to “outsource” various risks. In particular, from the bank’s perspective, this approach allows the FinTech companies to assume technology risk

21 One participant suggested that many banks do not realize how urgent the need for digital transformation is. “I would advise the banks to think about making selected FinTech collaboration go deeper and faster,” she said, “because right now there is too much time spent in the sandbox, too much procrastination.”



(the experimentation and high failure rates required to invent tech solutions) and capital risk (the high failure rate of venture-backed startup companies). Additionally, partnering with FinTechs allows banks to mitigate some of the regulatory risks associated with FinTech products because many startups operate in what one participant called a “regulatory-lite” environment, whereas banks have more stringent compliance obligations. One participant, though, suggested these sorts of partnerships also introduce risks for banks, particularly reputational risks because the potential faults of these untested FinTechs—incomplete or buggy products, failure to protect data privacy, and even fraud—are attached in the minds of consumers to their well-known banking partners. This reputational risk grows, she argued, the more fully banks and FinTechs are integrated.

Another Philippine commercial bank has taken a different approach to FinTech collaboration. As described by one roundtable participant, “Instead of changing the whole company, Philippine National Bank opted to set up a new company where all of the incubation and collaborations with FinTechs happen.” The bank continues to handle the clearing and settlement of transactions, but the separate venture manages experimentation with new technologies and collaboration with FinTech startups. One participant, though, wondered if this approach might slow down the cultural change required for a more complete digital transformation by separating the staff working with FinTechs from the traditional banking staff. The participant that raised this example replied by suggesting that developing a track record of success in the side company is seen as an important step in convincing management of the value of further integrating with FinTech firms.

Finally, one participant described how PayPal, one of the world’s first FinTech companies, has approached its relationships with traditional financial institutions as a potential model for Philippine commercial banks to follow. As this participant explained, PayPal’s service offering is “more about risk management capabilities than financial services.” Before approving transactions, PayPal tests nearly 400 variables and can do so in a matter of milliseconds. “PayPal doesn’t lend from its own balance sheet,” this participant said, “but operates on an ‘asset-lite’ model, providing the risk and credit scoring capabilities to the bank so that the bank can use their licenses and the assets on their balance sheet to lend.” This approach enables lending to “market segments which are not traditionally served by large banks,” such as small e-commerce companies. But the challenge to implementing this model of collaboration is that banks often lack a standardized “service architecture,” one of several frictions roundtable participants discussed.



FRICTIONS

According to the roundtable discussion, five frictions continue to complicate the relationship between banks and FinTech companies, despite the compelling case for collaboration. These frictions are incompatible business cultures, a lack of technical capacity with banks, procurement hurdles, missing data, and an inadequate “service architecture.”

According to one participant, “The path to symbiotic convergence [between FinTechs and banks] requires banks to undertake a transformation which is principally cultural, not technological.” His point was that for banks to incorporate FinTech solutions into their product offerings and operations, they also had to incorporate a FinTech approach to designing and deploying technological solutions. To do so, this participant and others argued, is dependent on unlearning traditional management heuristics. It requires becoming comfortable with iterating based on consumer feedback and small experiments in which failure is an acceptable outcome.²²

Related to cultural frictions is the fact that many smaller banks are simply unaware of how FinTechs might support their operations or lack the technical capacity to integrate digital products into their offerings. One participant pointed to conclusions found in a 2018 report from Voyager Innovations and its FinTech arm, FINTQ.²³ The report studied the digital readiness of 76 smaller financial institutions in the Philippines, including thrift banks, rural banks, and microfinance institutions. Nearly 60 percent of the institutions studied fell into the report’s category of “digital laggards,” defined as having “minimal or scant capacity for digital transformation.” The participant who highlighted these findings suggested they represent an opportunity for meaningful engagement from development agencies and other partners working to improve financial inclusion. In particular, she argued rural banks would need “technical guidance” as they seek to identify FinTech partners, migrate core banking processes to the cloud, and train staff to work with new technologies.

A third friction that is part cultural, part technical, and part procedural involves the current procurement requirements of many traditional banks. According to one roundtable participant, procurement departments often balk, naturally enough, at working with FinTech firms because the latter are frequently young, two- to three-year-old companies with unproven management and negative or irregular cash flows. To solve this problem, this participant recommended developing “a trusted third-party assessment for FinTechs,” either managed by a government office or a FinTech

²² One participant pointed to the positive example of UnionBank, which had “gone through 40 iterations” of its mobile app in the first 15 months after it was launched, “based on interacting with customers and co-creating with customers.” The culture in many traditional banks, several roundtable participants suggested, would resist this kind of iterative process.

²³ John Alliage Morales, “Are Philippine Financial Institutions Ready for DX? A Baseline Study,” Voyager-FINTQ, Inclusive Digital Finance Report, Vol. III, 2018.



industry association, either of which could provide a form of accreditation to fast track banks' procurement approval process.

A fourth friction affects those banks that are actively looking to integrate with FinTechs. These banks often lack the amount of data FinTechs need to implement their solutions. One participant said her company can only extend a small fraction of the services they offer in China to Southeast Asian banks, primarily because of a lack of data. For example, she said, the credit scoring method they developed in China uses 5,000 variables and has resulted in very low rates of non-performing loans for the banks that adopt it, but in the Philippines, "We could hardly find a bank that has even 1,000 of the variables we're looking for, and so we end up implementing a scaled-down version."²⁴

Finally, and perhaps most importantly, collaboration between banks and FinTechs is impeded because banks have, to use one participant's phrase, an inadequate "service architecture." Many FinTechs operate as service providers, looking to plug in their technology to support or enhance the operations of larger financial institutions. The way FinTechs prefer to do so is through open APIs, which allow for easy integration between the FinTechs' systems and those of the banks, in what is sometimes referred to as "open banking." However, most banks in the Philippines, according to several roundtable participants, are not ready to adopt API-enabled services. The result is that FinTechs have to adapt their package of service offerings to each particular institution they work with. As one participant from the FinTech sector explained, "The challenge in many markets, including the Philippines, is that this ends up being a bilateral integration that we have to do with each bank, as opposed to having a common infrastructure which allows companies like ours to have an API-based integration to do funds in and funds out and to be able to easily exchange information about users."

The transition to "an API-based integration" will also require, according to another participant, that banks increasingly migrate their data storage to the cloud. "FinTechs are all 'cloud-native,'" this participant said. As discussed in the regulatory section below, this transition may require some government guidance. An early positive sign for the Philippines in this regard has been the BSP's support for Cantilan Bank as this rural bank transferred its core banking processes to the cloud, with funding and technical assistance from the Asian Development Bank. The lessons from that experience, as shared at the roundtable, are captured in Box C below.

²⁴ One participant from the Philippine real estate industry believed that banks could potentially partner with realtors to gain greater access to useful consumer data that are provided voluntarily by homebuyers. "My company alone," she said, "has data on about 300,000 buyers." While this sort of non-traditional data sharing raises the issue of consumer consent, it also, this participant argued, could fill a gap in the data profile of bank customers while "making the process of buying and financing seamless" for homebuyers.



SUMMARY: COLLABORATIONS BETWEEN BANKS AND FINTECHS

Roundtable participants generally agreed there is a compelling case for collaboration between banks and FinTechs. The case is made all the more urgent by changing consumer expectations and the emergence of the large TechFins. While participants advanced several models of collaboration—the “funnel” approach, establishing a separate company, and the “asset-lite” model—this part of the roundtable discussion generated less consensus and resulted in a discussion of the various frictions that continue to slow the rate of bank-FinTech integration. The main frictions highlighted in the discussion were business culture; low levels of awareness and capacity to adopt technological solutions, particularly among smaller, rural banks; procurement issues; missing data; and the lack of a “service architecture” that FinTechs can plug into.

As discussed in the final section of this report, roundtable participants identified several ways regulators might help in smoothing over some of these frictions, as well as other activities the government might undertake to accelerate the expansion of digital financial inclusion in the Philippines.

Box C. Lessons from Cantilan Bank’s Transition to the Cloud

In 2017, Cantilan Bank, one of the Philippines’ larger rural banks, established a partnership with the Asian Development Bank (ADB) to launch a pilot project aimed at migrating Cantilan’s core banking processes to the cloud. The partners designed the project to comply with BSP Circular 808, which was issued in 2013 and provided the first regulatory guidance on the adoption of cloud computing in the Philippine financial industry. The project was also accepted into the BSP’s regulatory sandbox, allowing the project to proceed under the regulator’s “test and learn” framework. The ADB provided a grant of US\$150,000 to fund the project as well as technical support during the implementation phase.

As a result of this pilot, in January 2019, Cantilan Bank became the first bank in the Philippines to utilize an entirely cloud-based core banking system.²⁵ As one roundtable participant detailed, Cantilan Bank and the ADB learned a number of lessons in this process that are applicable to other banks contemplating migrating their data processing and storage to the cloud, as well as to other efforts to integrate new financial technologies into traditional banking operations. These lessons fell into six broad categories:

²⁵ For more on the “success factors” and “lessons learned” the ADB has identified from this project, see Kelly Hattel and Lotte Schou-Zibell, “Cloud-based Core Banking in the Philippines,” ADB, April 2019.



Box C. Continued

1. *Change management:* The partners found that though they had incorporated change management into their design, the process of migrating systems into the cloud changed more aspects of the bank's operations than they anticipated. They emphasized the importance of internal management and communication processes, but also the need to think about the labor force that was previously maintaining the bank's on-site servers. "They have to be retrained," because their role has also been outsourced to the company providing the cloud computing services.

2. *Underestimating capacity:* The partners found they had underestimated the capacity of the banking staff, particularly in the areas of accounting and auditing, and these shortcomings were exacerbated by the move to a cloud-based core banking system. This required additional technical support from the ADB "throughout the whole process."

3. *Time for implementation:* The main lesson is "to factor in more time." The partners found there were many "unknowns" that required additional time to resolve and processes they assumed would be "frictionless," such as ATM integration, took much longer than expected. Their original 18-month timeline stretched to 30 months.

4. *The regulatory sandbox:* The partners found running the pilot project within the BSP's regulatory sandbox "was very useful because the project was tested in a safe environment before being scaled and replicated. It also provided a great learning opportunity for Cantilan, the ADB, and the central bank." They also found, though, that while the entry policies for participating in the BSP sandbox are clear, "it would be useful to have clearer exit strategies for the sandbox."

5. *Collaboration:* The pilot project represented a collaborative effort among Cantilan Bank, the ADB, the BSP, and the cloud computing Software-as-a-Service (SaaS) provider, a technology group called Oradian. The partners found success depended on "a very close dialogue during the whole process" so the four organizations could troubleshoot problems together as they arose.

6. *Cybersecurity:* The partners emphasized that cybersecurity planning "has to be integrated from the very early design stage" as a data breach would cause significant damage to the bank.



The Role of Regulators

As financial technologies have evolved, regulators worldwide have had to find a balance between creating an enabling environment for innovation and anticipating and mitigating the various kinds of risks FinTech expansion might pose for consumer protection or overall financial stability. In this regard, the Philippines has been no different.

In general, roundtable participants saw both the Bangko Sentral ng Pilipinas (BSP) and the Securities and Exchange Commission (SEC) as having a forward-looking view of FinTech and its potential to expand financial inclusion in the country. However, while the BSP generally “recognizes that FinTech innovations, if harnessed prudently, can unlock financial inclusion barriers,” as one roundtable participant said, regulatory officials also see risks involved in the wider use of financial technology. Those risks, this participant explained, include cybersecurity threats that could result in data breaches and service disruptions.²⁶ There is also a risk that poorly understood technologies and business models could “transform or accentuate traditional financial risks,” such as credit bubbles and liquidity crises. These risks are heightened, according to the same participant, because “the FinTech landscape has become increasingly complex, borderless, and fast-evolving.”

To mitigate these risks while also encouraging the further expansion of FinTech in the Philippines, the BSP has established a “FinTech roadmap” with three components: collaborative engagement with industry, commensurate regulations, and capacity building.

As for the first of these, the BSP intends to continue its collaborative engagement with the industry through its “test and learn” regulatory sandbox approach. This approach has been in place for a number of years and has guided the BSP as it evaluated its supervisory role concerning mobile payments, online lending, blockchain applications for the banking sector, and the migration of banking data to the cloud, as in the case of Cantilan Bank described above. Several roundtable participants praised the “test and learn” approach as an effective way to understand and effectively regulate emerging FinTech products and business models.

Second, the BSP intends to apply “commensurate regulations” in order to align surveillance and regulatory requirements with the activities pursued by various kinds of companies within the FinTech landscape. The goal here is to apply more regulatory scrutiny to FinTech activities that introduce greater risk to financial stability while

²⁶ One participant argued, “Cybersecurity is non-negotiable for anything [regulators] do, because if the next financial crisis is a cybersecurity crisis, there is no state bailout fund to step in and undo the damage. There will be a permanent loss of the financial infrastructure if we have a cyber issue.” He urged policymakers to include cybersecurity in their “design thinking” as they build policy frameworks and invest in new market infrastructure.



maintaining a lighter regulatory burden for those activities that are less risky. As an example, one participant pointed to the recent regulations applied to virtual currency exchange platforms, requiring them to register, submit regular reports to the BSP, meet minimal capital requirements, impose certain internal controls, and comply with anti-money laundering regulations imposed on other financial institutions.

Finally, the BSP's roadmap emphasizes "capacity building" within the central bank itself. As one participant explained, the BSP is "undertaking major organizational reforms and initiatives for a more proactive supervisory and regulatory stance." In addition to staff training, the regulator is considering ways to use technology—both regulatory tech ("RegTech") and supervisory tech ("SupTech")—to reduce the costs of effective regulatory supervision. As one participant explained, these technologies facilitate regular reporting from regulated institutions and "use artificial intelligence, machine learning, cloud computing, and APIs to enhance the timeliness and quality of risk-based decision-making" by regulators themselves. RegTech and SupTech have the added benefit, one participant said, of "signaling" to consumers and the financial sector the BSP's "openness and capacity to properly understand, assess, and monitor the developments in this rapidly changing industry."²⁷ Adopting these technologies, though, as one participant said, will require that the BSP take steps to help its staff "to quickly acquire the necessary knowledge, proficiency, and competence to keep pace with the fast evolving innovations."

In the context of this roadmap—and in consideration of the obstacles and frictions described throughout the roundtable—participants laid out several factors they believed should inform the BSP's ongoing FinTech strategy. As detailed below, these issues included enabling activities for two different categories of FinTech companies; the need for "cooperative oversight," as one participant called it, involving coordination among multiple regulators; and the importance of building—and using—the digital payment infrastructure.

Roundtable participants also talked about the important role an active FinTech industry association can play in informing and advancing a regulatory reform agenda. Box D provides a summary of this discussion.

²⁷ Another participant from Singapore, however, indicated that deploying RegTech and SupTech solutions could be difficult because "most of the compliance and supervisory frameworks are very principle-based, and so they are hard to codify." He added, "One thing [regulators in the region] should work together on is to build a codified language set for SupTech and RegTech."



ENABLING ACTIVITIES

To set the stage for a discussion of enabling activities the government could undertake, one participant recommended classifying FinTechs into two categories. The first group includes FinTech firms that are not seeking any form of regulatory license because they are mainly working as service providers for larger businesses, helping “to digitize existing financial institutions using far better technology and better methods to solve legacy problems,” this participant explained. These firms are typically small and focused on a single, narrow issue. As a group, they represent around 80 percent or more of newly established FinTech companies. The second category might be called disruptive FinTechs. They include roughly 20 percent of FinTech firms—those directly challenging and competing against traditional financial institutions because they believe they, the FinTechs, have a better business model. Philippine regulators, this participant argued, should pursue distinct enabling strategies for each of these two categories because each has different needs and presents different risks for financial stability.

For those FinTech firms working mainly as service providers for larger financial institutions, this same participant recommended, the government can take two important steps to help banks create the missing “service architecture” described in the discussion of frictions above. First, since many of these FinTechs are themselves “cloud native,” the BSP should, according to this participant, “establish clear cloud computing guidelines,” instructing banks, insurance companies, and other traditional financial institutions on approved ways to migrate data processing and storage to the cloud. “Unless policymakers clearly give direction to the banks that they can go into the cloud,” this participant said, “the whole integration [of banks and FinTechs] is just not possible. At best, it will be a patchwork.”

In the Philippines, though, as another participant pointed out, the BSP “has already issued guidelines on cloud usage by banks and other financial institutions under its jurisdiction.” These guidelines appear in Circular 808, which was issued in 2013. As suggested by BSP’s support for Cantilan Bank in its transition to cloud processing, Philippine regulators appear more than willing to encourage further data migration to the cloud. The issue, therefore, is not the lack of regulatory guidance or support but that these guidelines are not well known or that banks have been slow to pursue cloud migration for other reasons.

Along with encouraging the use of the cloud, another enabling activity would be to “nudge the banks to use open architecture,” as one participant said. Currently, banks have partnership policies designed for working with large, outsourcing partners, not for engaging with smaller service providers. There may be a role for the BSP to play in pushing banks to publish open APIs to facilitate collaborations with smaller FinTech firms. As an example of this sort of enabling activity, one roundtable participant



pointed to the United Kingdom. She explained, “In January of 2018, the nine largest banks were required to open up their APIs to licensed third-party providers.”²⁸ As a result, consumers can easily access new service offerings—this participant mentioned wealth management apps—and have greater control of how their banking data are shared with third parties.

For the second category of disruptive FinTech firms—those that aim to be competitors, not service providers, to traditional financial institutions—roundtable participants argued financial regulation should become more activities-based and modular.²⁹ Recognizing that many new players in financial services “may not fall within the traditional supervisory and regulatory frameworks,” as one participant said, regulators will likely need to regulate behavior, not particular types of institutions. To do so effectively while also pursuing the BSP’s goal of “commensurate regulation,” it may be necessary to take a modular approach so banks, FinTechs, TechFins, and any other actors have to comply with specific segments of regulatory code based on their business activities. As an example of how this approach is being implemented elsewhere in the region, one participant pointed to Singapore, where Parliament passed the Payment Services Bill in January 2019. The new law identifies specific types of payments activities and establishes licensing rules so that, as an overview of the law published by the Monetary Authority of Singapore explains, companies hold “a class of license that corresponds to the risk posed by the scale of payment services provided.”³⁰

28 One participant argued, “Cybersecurity is non-negotiable for anything [regulators] do, because if the next financial crisis is a cybersecurity crisis, there is no state bailout fund to step in and undo the damage. There will be a permanent loss of the financial infrastructure if we have a cyber issue.” He urged policymakers to include cybersecurity in their “design thinking” as they build policy frameworks and invest in new market infrastructure.

29 With the arrival of new FinTech business models and, particularly, the entrance of TechFins into the space, regulators have increasingly recognized a need to take an “activities-based approach” to regulation. For more on how this view has evolved in Thailand, see John Schellhase and Staci Warden, “Framing the Issues: The Future of Finance in Thailand,” Milken Institute, July 2018.

30 See “Explanatory Brief on the Payment Services Bill,” Monetary Authority of Singapore, November 2018.



Box D. The Role of FinTech Industry Associations

According to roundtable participants, there are three ways FinTech industry associations can proactively advance the development of the sector.

First, they can play a positive role in informing policy reforms. As one participant said, the main task of an association is “to play an active role in advising and working together with the regulators.” This participant identified two reasons FinTech associations should play an active advocacy role. The first is that “if FinTechs rely on the regulators it will take time, a long time” to see policies put in place. The second reason is that FinTechs operate under a variety of different business models, and it is difficult for regulators to assess how policies will affect different approaches without input from industry. This participant recommended the FinTech association establish various working groups, each tasked with tackling regulatory reforms for particular issues such as e-KYC, credit insurance, and credit scoring models.³¹


Second, roundtable participants argued, FinTech associations should establish codes of conduct to guide the activities of FinTech players. According to these participants, FinTech codes of conduct should include issues such as consumer data protection and the corporate governance and transparency of FinTech firms. These self-imposed standards can increase trust among the public and traditional institutional partners.

Third, FinTech associations have an important role to play in reducing the frictions involved in bank-FinTech partnerships. As discussed above, FinTech associations might usefully provide “a trusted third-party assessment” of their members for procurement officers at traditional banks. More ambitiously, FinTech associations could lead the creation of “industry-led sandboxes,” according to several roundtable participants. These collaborative frameworks allow banks and FinTechs to publish APIs, share data, and run collective experiments “at a fraction of the cost” a commercial bank would spend if it were to run the same sort of experiment on its own, as one participant said. Another participant explained that an industry-led sandbox is “a way for even small FinTech players to scale or test their products at scale.”

³¹ This participant pointed to the role of the Indonesian Fintech Lending Association in pushing forward the development and passage of “two critical regulations fundamental to the FinTech sector,” Financial Services Authority (OJK) Regulation No. 35 on bank-FinTech collaboration and OJK Regulation No. 77 on peer-to-peer lending platforms.



Box D. Continued



On this point of industry-led sandboxes, one participant recommended the Philippine FinTech players aim to participate in the ASEAN Financial Innovation Network, a regional industry-led sandbox for Southeast Asia launched in 2017 by the Monetary Authority of Singapore and the ASEAN Bankers Association. According to this participant, there is a strong case to be made for adopting a regional approach. On the one hand, establishing standalone sandboxes for each country is expensive. On the other, this participant said, “FinTechs don’t make money by operating in their own country. They need multiple geographies for sustaining their business model.” If the goal is to enable the FinTech sector to thrive, this participant argued, the industry-led sandbox should be regional in nature.

Another participant, however, made the counter-argument. “Although there are advantages to having a regional sandbox that some regional players agree on,” he argued, “there remains a need for a country-level industry sandbox because of unique regulations and competitive dynamics that firms experience in each country.” He noted the Singapore FinTech ecosystem differs from the Philippine ecosystem “in terms of market behavior, financial service needs, and the rules that regulators enforce.”

Finally, there was a general consensus at the roundtable that among the most important enabling activities the government could undertake—to the benefit of both groups of FinTechs—would be initiatives to increase financial and digital literacy throughout the Philippines. As discussed in the section on adoption barriers above, financial literacy is a critical component of financial inclusion. But roundtable participants argued digital literacy is also becoming increasingly important and requires attention from public officials. According to one participant, “How the country trains its people on the ability to safely consume digital services is a critical responsibility of policymakers, and it requires a national framework.”

As several participants explained, the importance of digital literacy is two-fold. First, it involves the ability to protect personal data and consent to its use. Second, digital literacy and “cybersecurity hygiene,” to use one participant’s phrase,³² are the first line of defense for the security of organizational datasets and the financial industry as a whole from cyber-attack. For both aspects of digital literacy, one participant highlighted the need to focus on “capacity building among the social sector” because often NGOs and civil society organizations play an important role “on behalf of the poor to help them understand how data is used and how technology is evolving.”

³² Good “cybersecurity hygiene,” for example, involves using best practices to create and guard secure online passwords.



COOPERATIVE OVERSIGHT

As several participants noted, divergent policies and legal interpretations among government agencies can lead to “unintended consequences” that slow time-to-market for new FinTech products and give investors pause as they consider deploying capital in the FinTech space. In the Philippines, the activities of FinTech companies fall under multiple regulatory jurisdictions, with the BSP, the SEC, the DOF, the Insurance Commission, the PDIC, the Department of Labor, the Department of Social Welfare and Development, the Land Transportation Franchising and Regulatory Board, and the Philippines Statistics Authority all playing some role in approving FinTech products. To facilitate faster deployment of FinTech solutions and encourage investment, roundtable participants encouraged government agencies to adopt a stance of “cooperative oversight.”

To emphasize the need for this kind of approach, one participant pointed to the case of Lenndo, a Singapore-based FinTech startup that aggregates consumer credit products from various lenders on a single platform. Two unexpected questions arose for Lenndo as it started operations in the Philippines, both of which related to legal requirements about national ownership. First, Lenndo faced the question of whether aggregating loan details from various parties and promoting them on its platform is a form of “mass media.” If so, the company would have to be 100 percent Filipino-owned. Second, if Lenndo’s activities fell legally into the realm of advertising, it would have to abide by the ownership rules that say advertising firms have to be at least 60 percent Filipino-owned. Under either definition, the company would have had to stop operating in the Philippines or sell a significant ownership stake to Filipino owners.

In the end, though, the SEC ruled that neither the mass media nor advertising label applied. “But,” one roundtable participant from the Philippines added, “there is a real risk that other government agencies could render different interpretations that would unduly restrict FinTech growth in the Philippines, rulings having nothing to do with cybersecurity or data policy, just the old issues of nationality which are effectively deal-killers.” Another participant from outside the Philippines called these remarks “sobering.”

To avoid these “unintended consequences,” one roundtable participant argued there must be an “inter-industry” regulatory effort to align the policies of the various agencies involved, “if financial inclusion is an overarching goal of the country.” Other participants echoed this call for “cooperative oversight.”

Interestingly, the Philippines might already have some structures in place to serve as venues for understanding and solving cross-cutting FinTech regulatory challenges. One participant noted that “the regulators have been anticipating the rise of FinTech for some time” and have established a FinTech Working Group within the Financial



Sector Forum—a formal consultative body comprised of the BSP, SEC, the Insurance Commission, and the PDIC—to facilitate coordination among financial sector regulators. For wider issues of regulatory coordination, participants pointed to the National Financial Inclusion Steering Committee as a natural entity to address the emerging concerns from industry. This group was established in 2016, is chaired by the BSP, and includes 15 government agencies.³³ According to one participant, “A lot of the cross-cutting issues mentioned today could be discussed via that platform.”

BUILDING—AND USING—PUBLIC INFRASTRUCTURE FOR DIGITAL PAYMENTS

There was a consensus among roundtable participants that part of the government’s role will be investing in public infrastructure. Much of this discussion, including calls for a digital-ready national ID, is captured above in the section on barriers. However, it is worth adding here that roundtable participants pointed to Singapore’s PayNow system and Thailand’s PromptPay as good examples of interoperable frameworks that enable the development of various types of FinTech companies and products.³⁴ Several participants thought the Bank of Thailand’s approach could be a good model for the Philippines. Table 2 shows the elements of Thailand’s Payment System Roadmap 4, which is currently being implemented.

In addition to building a digital payment system, several roundtable participants insisted the government should use the digital payment system. As one participant said, “The best way for government to come in is to actually leverage its budget of PHP 3.7 trillion [about US\$71 billion] every year.” By increasingly disbursing government salaries, pensions, and other government benefits and subsidies digitally, he argued the government “can create an ecosystem where it becomes viable for other players to operate.” The Philippine government appears to be taking this

33 Executive Order No. 208 established the National Financial Inclusion Steering Committee in June 2016. The departments designated as members in the order are the BSP (chair), the DOF, the Department of Education, the Department of Trade and Industry, the Department of Social Welfare and Development, the Department of Budget and Management, the National Economic and Development Authority, the Insurance Commission, the Commission on Filipinos Overseas, the SEC, the Philippines Statistics Authority, the PDIC, and the Cooperative Development Authority, while the heads of other agencies “may be invited as necessary.”

34 Though not raised explicitly at the roundtable, it is important to note the BSP has also established interoperable payment systems through the InstaPay and PesoNet automated clearinghouses. The BSP is requiring banks and other financial institutions transition to these systems, but compliance has been uneven.



advice,³⁵ though more could be done. Taking this point from the other direction, another roundtable participant urged the government not only to make digital payments but also to receive them. He pointed to a proposed Department of Finance initiative called PHPay as an attractive but undeveloped opportunity to do so.³⁶

Table 2. The Five I's Framework of the Bank of Thailand's Payment System Roadmap 4

1 Interoperable Infrastructure	"To develop a resilient and stable payment infrastructure that complies with national standards as well as cross-border connectivity"
2 Innovation	"To drive the development of innovative services that meet user needs"
3 Inclusion	"To improve access to digital payment services as well as to promote literacy and adoption"
4 Immunity	"To ensure payment system stability through risk management tools and to ensure responsive and proactive supervision and consumer protection"
5 Information	"To use technology to enhance data integration and analytics to support digital payment utilization"

As presented at the Milken Institute's March 5, 2019, roundtable in Manila

35 In some laudable ways, the government is already leading in this regard. A study from the Better for Cash Alliance in 2015 found that over 50 percent of government payments were made electronically, compared to only 1 percent of business payments.

36 According to a DOF press release from April 2018, the PHPay system is meant to be "an online-based payment gateway that will enable taxpayers and other state clients to remit fees and other charges electronically to government agencies." The roundtable participant who raised this issue called PHPay a "middleware" that would facilitate digital payments from citizens to provincial and city governments by establishing a trusted network of prequalified payment platforms and providers, including several FinTech startups. This participant noted, though, that after a technical meeting for industry players hosted by the DOF in December 2018, there had been no follow-up on the initiative. According to news reports following the roundtable, the BSP is now leading the PHPay initiative but is delaying implementation until the DOF and Bureau of Internal Revenue establish an "e-invoicing" process to provide payment receipts to citizens who use the platform. For more, see Melissa Luz T. Lopez, "Central bank to launch new clearing house for gov't," *Business World*, March 12, 2019.



SUMMARY: THE ROLE OF REGULATORS

According to the roundtable discussion, there is a positive role for government to play to facilitate the growth of the FinTech sector and expand FinTech-enabled financial inclusion. For service-oriented FinTechs, the regulators can encourage banks to adopt a better “service architecture” through publishing open APIs and moving data into the cloud. For disruptive FinTechs, roundtable participants recommended pursuing a modular, activities-based regulatory framework along the lines of Singapore’s recent Payment Services Bill. There was a consensus that effective regulation of the FinTech sector will require “cooperative oversight,” including frequent consultation and increasing coordination among the various government agencies whose policies affect the approval of new FinTech products. Participants pointed to the Financial Services Forum and the National Financial Inclusion Steering Committee as appropriate venues for these discussions. Finally, roundtable participants also called for the government to use the digital payment infrastructure the BSP has been building, both to send and receive payments.

Conclusion and Recommendations

The Philippines enjoys a number of possible advantages for increasing financial inclusion through FinTech, including widespread mobile and internet penetration, a rapidly growing economy, and a youthful population. Despite these potential drivers of digital transformation, cash remains the dominant payment method, and the formal financial system currently excludes around 70 percent of the population.

The roundtable discussion in Manila sought to understand these issues and identify the next steps FinTech firms, traditional financial institutions, policymakers, and regulators should take to advance a new kind of financial inclusion. According to several roundtable participants, expanding financial inclusion must mean more than access to a bank account. It needs to mean, they said, access to a variety of financial products—savings, payments, credit, and insurance—at the moment when they will be relevant to Filipinos’ daily lives. Financial inclusion, several roundtable participants argued, will increasingly require data inclusion, as technology enables the use of non-traditional data for credit assessment as well as the formal capture of informal financial behavior.

Several barriers, however, stand in the way of the FinTech sector’s growth. These barriers include gaps in infrastructure, both the physical infrastructure of mobile connectivity and financial access points and a policy architecture that might be called the “Philippine Stack,” built on the foundation of a digital-ready national ID. Alongside infrastructure issues, adoption barriers—including a lack of awareness, distrust of digital products, exclusion from traditional finance, and the surprising



inconvenience of many digital solutions—also impede the expansion of digital financial inclusion.

One potential way of overcoming some of these barriers might be increased collaboration between FinTech firms and traditional banks. But roundtable participants identified various frictions that impair increased integration. These frictions include clashing cultures, poor technical capacity within banks, procurement hurdles, missing data, and a lack of an API-enabled service architecture.

As captured throughout this report, roundtable participants recommended a variety of actions government and others could take to overcome the infrastructure and adoption barriers described above as well as to smooth some of the frictions for bank-FinTech integration. Among the various ideas presented, 10 core recommendations emerged from the discussion. These recommendations can be divided into four broad categories:

[Priorities for improving the national infrastructure required for FinTech expansion](#)

1. Ensure that the PhilSys national ID program is implemented in such a way that data will be accessible via open APIs.
2. Expand the use of the current digital payments infrastructure to send and receive government payments at a national and local level, and consider initiatives to expand the use of electronic payments by the private sector.
3. Include cybersecurity safeguards and planning in the earliest stages of project and policy design.

[National policy initiatives to create a more conducive regulatory environment](#)

4. Leverage the National Financial Inclusion Steering Committee and FinTech Working Group within the Financial Sector Forum as venues for identifying and addressing undue regulatory burdens affecting the development of the FinTech sector.
5. Explore what aspects of Singapore's modular approach to financial regulation might be usefully applied in the Philippines.



BSP initiatives to jumpstart further bank-FinTech integration

6. Continue to encourage banks to move data processing to the cloud through expanding awareness of BSP instructions on approved approaches to data migration and storage.
7. Determine how regulators should best "nudge" banks to publish APIs to encourage open banking.
8. Facilitate the procurement process for banks by establishing a trustworthy, third-party accreditation for FinTechs, either managed by the BSP or the FinTech Philippines Association.

Capacity building and education—potentially leveraging support from development partners

9. Develop capacity-building programs to improve knowledge of financial technologies within traditional banks, particularly rural banks.
10. Develop national educational programs to improve both financial and digital literacy.

In addition to these core recommendations, the roundtable discussion identified the critical need not just for consultation among government agencies but also additional and improved dialogue and engagement among a wide variety of actors. As one participant said, "Financial inclusion is not just a goal of the BSP or the SEC; it requires a broader ecosystem." On this point there appeared to be a clear consensus: FinTechs, banks, policymakers, regulators, and civil society will need to communicate more effectively with one another and work together if the exceptional potential for FinTech-enabled financial inclusion in the Philippines is to be achieved.



ACKNOWLEDGMENTS

On behalf of the Milken Institute, the author wishes to thank the Asian Development Bank for hosting the March 5 roundtable at its headquarters in Manila. Several individuals from the ADB merit special recognition for their support of the event, including Diwakar Gupta, vice-president for Private Sector and Public-Private Partnerships; Lotte Schou-Zibell, chief of Finance Sector Group, Sustainable Development and Climate Change Department; Kelly Bird, Philippines Country director; Marina Rose Best, advisor to the US executive director; and Raquel Ganalongo, operations assistant, Southeast Asia Department. The Milken Institute also thanks UnionBank of the Philippines for generously helping cover some roundtable costs.

The author also wishes to thank his Milken Institute colleagues for reviewing early drafts of this report and providing valuable feedback, particularly Staci Warden, executive director of Global Market Development; Cesar V. Purisima, former secretary of finance for the Republic of the Philippines and currently a Milken Institute Asia fellow; Dan Murphy, senior associate for the FinTech Program at the Center for Financial Markets; and Amos Garcia, research associate at the Asia Center.

ABOUT THE AUTHOR

John Schellhase is an associate director with the Milken Institute's Global Market Development practice. The GMD practice supports policymakers in developing countries and emerging markets in their effort to strengthen and deepen domestic capital markets and catalyze funding for national development priorities. As part of the GMD team, Schellhase has managed financial-sector development projects in Rwanda, Myanmar, Nepal, the Philippines, and Thailand. He is based in Madrid, Spain.

