

Special theme: Macroeconomic policies for inclusive sustainable development

CENTRAL BANKS AND FINANCIAL INCLUSION

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Central banks can address barriers to financial inclusion in multiple ways, including regulations regarding banks and non-bank institutions, identity and know-your-client (KYC) rules, support for innovative financial products, and support for innovative financial technology (fintech). At the same time, central banks must weigh the trade-offs between financial inclusion, financial innovation and financial stability. The present paper contains a survey the policies of central banks and other financial regulators in a number of emerging Asian economies to promote financial inclusion. It serves to identify successful experiences and important lessons, and it provides a review of policies central banks adopted during the COVID-19 pandemic.

Keywords: financial inclusion, central banks, financial regulation, payments systems, small and medium-sized enterprises, financial education, fintech

JEL classification: G21, G28, I22, O16

I. INTRODUCTION

Financial inclusion is receiving increasing attention as having the potential to contribute to economic and financial development while at the same time fostering more inclusive growth and greater income equality. Leaders of the Group of 20 (G20) countries have approved the Financial Inclusion Action Plan and established the Global Partnership for Financial Inclusion¹ to promote the financial access agenda. The Finance Ministers' Process, a forum for members of Asia-Pacific Economic Cooperation (APEC), addresses regional financial issues, including financial inclusion.² In the Association of Southeast Asian Nations (ASEAN), financial inclusion is a key objective of the Framework on Equitable Economic Development. Development organizations have been responsive, too. Many individual Asian economies have adopted strategies on financial inclusion as an important part of their overall strategies to achieve inclusive growth.

However, there is still much to achieve. One key indicator of household access to finance is the percentage of adults who have an account at a formal financial institution such as a bank, credit union, cooperative, post office, microfinance institution or mobile money provider. According to the World Bank Global Findex database for 2017, the worldwide average for this measure is 69 per cent, and while the total number of adults without a formal financial account remains high at approximately 1.7 billion, it has declined substantially from 2.7 billion in 2011. In Asia, China has the world's largest unbanked population (225 million or 20 per cent of adult population), followed by India (190 million or 20 per cent), Pakistan (100 million or 82 per cent) and Indonesia (95 million or 52 per cent). These four countries alone account for over one third of the unbanked globally (Demirgüç-Kunt and others, 2018).

The development of financial technology, fintech (i.e. a new generation of electronically delivered financial services), shows great potential to enhance financial inclusion by lowering costs and increasing efficiency. The COVID-19 pandemic accelerated the trend of adopting fintech services because face-to-face contact was more difficult and riskier. At the same time, fintech introduces new risks for consumers, especially those in disadvantaged groups with lower levels of financial sophistication.

The present paper contains a survey of a number of central banks and other regulators in emerging Asian countries to identify and assess their policies aimed at promoting financial inclusion. The countries examined are Bangladesh, India,

1 See www.gpfi.org/.

2 The annual forum was held most recently in May 2021 (See www.adb.org/news/events/11th-asia-pacific-financial-inclusion-forum).

Indonesia, the Philippines, Sri Lanka and Thailand. It includes a review of policies adopted to counter the effects of the COVID-19 pandemic. It also covers financial education programmes, financial regulatory frameworks and consumer protection programmes. The aim of the present paper is to identify successful experiences and important lessons that can be adopted by other emerging economies.

II. DEFINITIONS OF FINANCIAL INCLUSION

Financial inclusion broadly refers to the degree of access to financial services for households and firms, especially poorer households and micro-, small and medium-sized enterprises (MSMEs). However, as the sampling of definitions below shows, there are important variations in usage and nuance.

“Inclusive financial systems provide individuals and firms with greater access to resources to meet their financial needs, such as saving for retirement, investing in education, capitalizing on business opportunities, and confronting shocks” (World Bank, 2014, p. xi).

“...the process of promoting affordable, timely and adequate access to a wide range of regulated financial products and services and broadening their use by all segments of society through the implementation of tailored existing and innovative approaches including financial awareness and education with a view to promote financial well-being as well as economic and social inclusion” (Atkinson and Messy, 2013, p. 11).

“...four commonly used lenses through which financial inclusion can be defined, in order of complexity: access...quality...usage... welfare” (AFI, 2010, p. 6).

Notably, the word “access” does not mean just any kind of access, but implies access at reasonable cost and with accompanying safeguards, such as adequate regulation of firms supplying financial services and laws and institutions for protecting consumers against inappropriate products, deceptive practices and aggressive collection practices. Of course, it is difficult to define reasonable cost in cases where amounts involved are small and where there are information asymmetries. Therefore, one key question is the extent to which the Government should subsidize such services or otherwise intervene in the market. This perspective highlights the need for adequate financial education, as consumers cannot take advantage of access to financial services if they do not understand them. The rapid development of fintech points to the need for digital financial literacy.

Access to financial services has a multitude of dimensions reflecting the range of possible financial services from payments and savings accounts to credit, insurance, pensions and securities markets. The relevant services vary for individuals and for firms. Another important dimension is actual usage of such products and services. Campaigns to increase the number of bank accounts cannot be regarded as successful if those accounts are used rarely or never.

III. RATIONALE FOR FINANCIAL INCLUSION

There are several arguments in favour of greater financial inclusion. Poor households are often severely cash constrained, so innovations that increase the efficiency of their cash management and allow them to smooth consumption can have significant impacts on welfare. Relying on cash-based transactions imposes many costs and risks. In some cases, transactions entail carrying relatively large amounts of cash over long distances, raising issues of safety. Also, many studies find that the marginal return to capital in MSMEs is large when capital is scarce, which suggests that they could reap sizeable returns from greater financial access (Demirgüç-Kunt and Klapper, 2013). This is particularly important in Asia due to the large contribution of MSMEs to total employment and output. Greater financial inclusion can also contribute to reducing income inequality by raising the incomes of the poorest income groups disproportionately (Beck, Demirgüç-Kunt and Levine, 2007). Financial inclusion may also contribute to financial stability by increasing the diversity of bank assets and by increasing the stable funding base of bank deposits. Greater financial access could support shifts by Governments toward cash transfer programmes rather than wasteful subsidies, and the greater transparency associated with electronic funds transfers could help reduce corruption, money laundering and terrorism financing. The benefits of greater financial access proved to be a very important benefit during the COVID-19 pandemic.

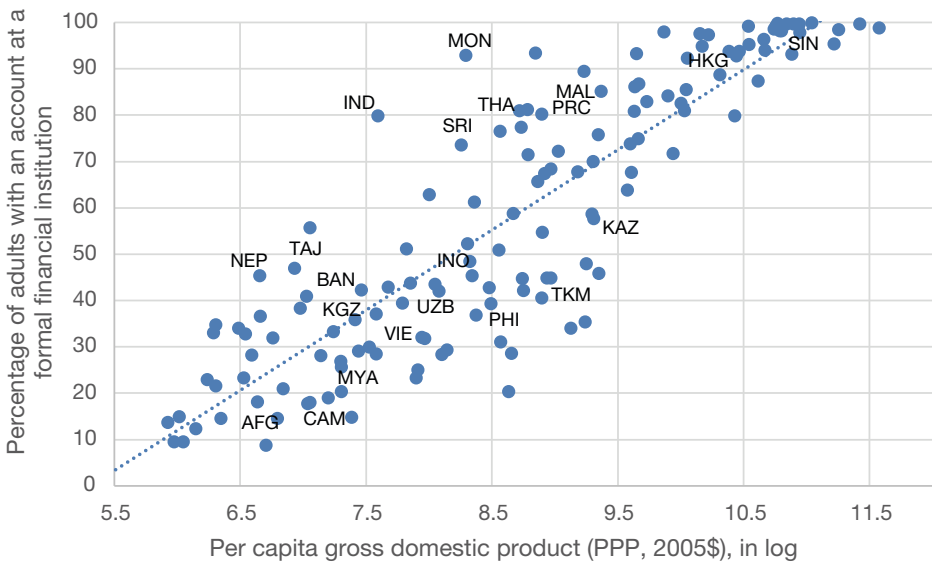
IV. STATUS OF FINANCIAL INCLUSION IN ASIA

Households

The most commonly used measure of financial access is the share of adults over age 15 who have an account at a formal financial institution. Financial access of households tends to rise with per capita gross domestic product (GDP), as would be expected, but there is still huge variation across countries for which data are available (figure 1). The magnitude of variation implies that other factors besides income play important roles, including overall financial development and regulatory, institutional, social and geographic factors. For example, Bangladesh has much higher

deposit penetration than Nepal or Afghanistan, even though per capita income levels are similar. India lies well above the trend line due to its successful campaign for bank deposits, while the Philippines and Viet Nam are considerably below it. More importantly, perhaps, the majority of Asian economies have deposit penetration of less than 50 per cent.

Figure 1. Relation of per capita gross domestic product to deposit penetration for adults, 2017



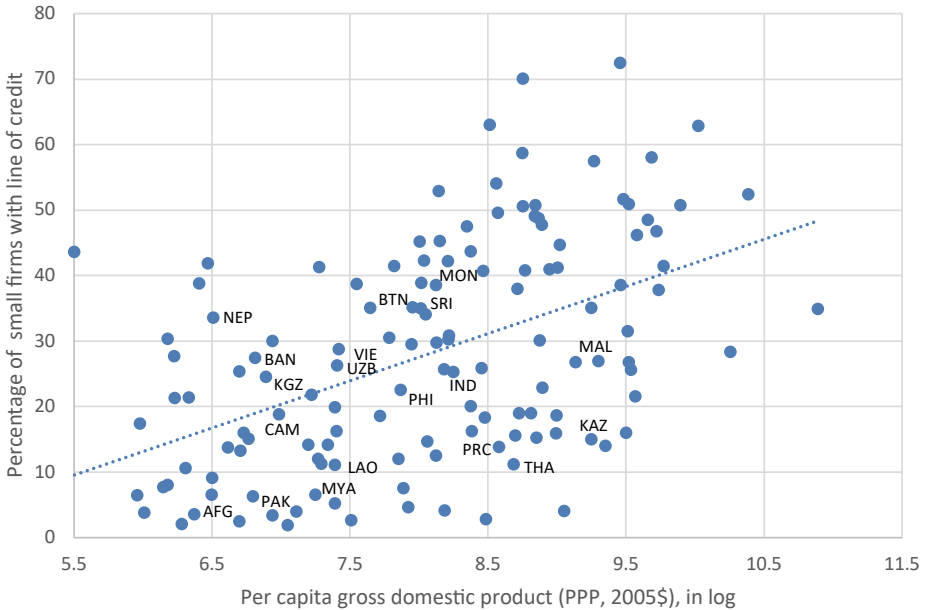
Source: World Bank Global Findex Survey, www.worldbank.org/en/programs/globalfindex.

Abbreviations: AFG, Afghanistan; BAN, Bangladesh; HKG, Hong Kong, China; IND, India; INO, Indonesia; KAZ, Kazakhstan; KGZ, Kyrgyzstan; MAL, Malaysia; MON, Mongolia; MYA, Myanmar; NEP, Nepal; PHI, Philippines; PPP, purchasing power parity; PRC, China; SIN, Singapore; SRI, Sri Lanka; TAJ, Tajikistan; THA, Thailand; TKM, Turkmenistan; UZB, Uzbekistan; VIE, Viet Nam.

Firms

Figure 2 shows a fairly strong positive relationship between per capita GDP and the share of small firms with a line of credit, but the pattern among emerging Asian economies shows a high degree of variation. Compared to the availability of data on household access to finance, data are available for considerably fewer countries on the share of small firms with line of credit. Notably, the borrowing share of small firms is more than 30 per cent in very few Asian countries.

Figure 2. Share of small firms with line of credit



Source: World Bank Global Findex Survey, www.worldbank.org/en/programs/globalindex.

Note: Data range from 2010 to 2017, depending on the country.

Abbreviations: AFG, Afghanistan; BAN, Bangladesh; BTN, Bhutan; CAM, Cambodia; IND, India; KAZ, Kazakhstan; KGZ, Kyrgyzstan; LAO, Lao People's Democratic Republic; MAL, Malaysia; MON, Mongolia; MYA, Myanmar; NEP, Nepal; PHI, Philippines; PPP, purchasing power parity; PRC, China; SRI, Sri Lanka; THA, Thailand; UZB, Uzbekistan; VIE, Viet Nam.

V. BARRIERS TO FINANCIAL INCLUSION

Barriers to financial inclusion can be classified as either supply side or demand side. Supply-side barriers reflect limitations on the capacity or will of the financial sector to extend financial services to poorer households or MSMEs. These can be further subdivided into three categories: market-driven factors; regulatory factors; and infrastructure limitations.

Market-driven factors include aspects, such as relatively high maintenance costs associated with small-size deposits or loans, high costs associated with providing financial services in small towns in rural areas, lack of credit data or usable collateral

and lack of convenient access points. Provision of financial services in rural areas can pose particular problems in archipelagic countries such as Indonesia or the Philippines. Lack of credit data and reliable financial records worsens the problem of information asymmetry that discourages banks from lending to poorer households and MSMEs.

Regulatory factors include capital adequacy and supervisory rules that may limit the attractiveness of small-size deposits, loans or other financial products to financial institutions. Strict requirements regarding opening of branches or installing automated teller machines may also restrict the attractiveness of doing so in remote areas. Identification and other documentation requirements are important both with respect to know-your-client (KYC) requirements and monitoring for anti-money laundering/combating the financing of terrorism (AML/CFT), but these can pose problems for poor households in countries which do not have universal individual identification systems. Regulatory requirements can also restrict the entry of microfinance institutions, such as restrictions on foreign ownership and inspection requirements.

Infrastructure-related barriers include lack of access to secure and reliable payments and settlement systems, the lack of availability of either fixed or mobile telephone communications, the lack of access to the Internet, and the lack of availability of convenient transport to bank branches or automated teller machines. Again, these can pose particular problems in archipelagic countries. Numerous studies have identified the lack of convenient transport as an important barrier to financial access (Tambunlertchai, 2017).

Demand-side factors include a lack of funds, lack of knowledge of financial products (i.e. financial literacy) and lack of trust. Lack of trust can be a significant problem when countries do not have well-functioning supervision and regulation of financial institutions or programmes of consumer protection that require, among others, adequate disclosure, regulation of collection procedures and systems of dispute resolution.

VI. APPROACHES TO PROMOTE FINANCIAL INCLUSION

Strategies for promoting financial inclusion can be implemented at the national level, as well as by central banks, financial regulatory agencies, private institutions and non-governmental organizations. Among countries in Asia, Indonesia, the Philippines and Thailand are relatively advanced, having developed broad national strategies for financial inclusion. Efforts to promote MSMEs in Thailand are well advanced and are organized through the SME Master Plan. The third master plan came into effect in 2012 and covered a five-year period ending in 2016. In South Asia, India stands

out for its successful “JAM” strategy for financial inclusion with three key elements: the Pradhan Mantri Jan Dhan Yojana (PMJDY) scheme for increasing bank deposits; the Aadhaar biometric identity scheme; and the widespread use of mobile phones.

Strategies for promoting financial inclusion encompass five broad areas: (a) inclusion-oriented financial institutions; (b), subsidized funding; (c) development of innovative products and services; (d) development of innovative delivery technologies; and (e) development of innovative systems to enhance access to credit. These elements are shown in table 1 for the countries included in the present study.

Table 1. Elements of financial inclusion strategies

Country	Inclusive financial institutions	Subsidized funding	Innovative financial products and services	Innovative delivery technologies	Innovative systems to enhance credit access
Bangladesh	Cooperative societies, postal savings bank, Grameen Bank, licensed NGO-MFIs	Palli Karma Sahayak Foundation for MFIs; refinancing of bank loans to SMEs	Microdeposits, microloans, Taka Ten bank accounts for farmers, school banking program	Mobile phone banking	
India	Regional rural banks, united community banks, Local Area Banks, NBFC-MFIs	Micro Units Development and Refinance Agency Bank	No-frills bank accounts (with additional services to be added), business correspondents	Telephone bill-paying	Stock exchange platforms for SMEs, credit bureaus
Indonesia	Bank Perkreditan Rakyat, Bank Pembangunan Daerah, Bank Rakyat Indonesia		Grameen Bank-style microcredit products, Islamic microfinance products	Telephone banking, e-money	Loan guarantee programs

Table 1. (continued)

Country	Inclusive financial institutions	Subsidized funding	Innovative financial products and services	Innovative delivery technologies	Innovative systems to enhance credit access
Philippines	Rural banks, cooperatives, credit cooperatives, credit NGOs		Microdeposits, microloans, and microinsurance products; agents for insurance, e-money, and payments	Telephone banking, e-money	
Sri Lanka	Cooperatives, NGO-MFIs, community-based organizations, Samurdhi, rotating savings and credit associations			Telephone banking via point of sale terminal, e-remittance services	
Thailand	State financial institutions, cooperatives and occupational groups, savings groups for production, village funds			Telephone banking, e-money	Loan guarantee program, credit database (in development)

Sources: ADBI (2014); BUCFLP (2014); Barua, Kathuria and Malik (2017); Kelegama and Tilakaratna (2017); Khalily (2017); Llanto (2017); Tambunan (2017); and Tambunlertchai (2017).

Abbreviations: MFI, microfinance institution; NBFC, non-banking financial company; NGO, non-governmental organization; SMEs, small and medium-sized enterprises.

Inclusion-oriented financial institutions

Inclusion-oriented financial institutions include microfinance institutions (MFIs), state-owned banks, post offices offering financial services, credit cooperatives and

community organizations. In India there are state-owned agricultural banks and local banks, such as Regional Rural Banks, United Community Banks and Local Area Banks (Barua, Kathuria and Malik, 2017). Institutions were established in Indonesia, including Bank Perkreditan Rakyat, Bank Pembangunan Daerah and Bank Rakyat Indonesia (Tambunan, 2017). In Thailand, specialized financial institutions operate as banks and cater to lower income households and smaller firms, including the Small and Medium Enterprise Development Bank of Thailand, the Bank for Agriculture and Agricultural Cooperatives and the Government Savings Bank.

Subsidized funding

Subsidizing the costs of loans is one way to make them more accessible to the unbanked. Examples include the Palli Karma Sahayak Foundation for MFIs and refinancing of bank loans to SMEs in Bangladesh and the Micro Units Development and Refinance Agency Bank in India. However, the performance of state-owned banks and government finance programmes has been mixed, and these experiences have shifted the emphasis away from specialized state-owned lenders to more market-based solutions.

Innovative products and services

Innovative products and services include various products such as no-frills bank accounts, microcredits and microinsurance, the development of agent banking and the establishment of micro branches of banks. In India there were an impressive 411.3 million new bank accounts as of 21 October 2020 (PMJDY, 2020). However, the World Bank Global Findex Survey of 2017 (Demirgüç-Kunt and others, 2018) estimated that 48 per cent of Indian bank accounts were inactive (i.e. they saw no activity during the year). This implies a far lower degree of effective financial inclusion. Unfortunately, more recent data are unavailable, although the use of bank accounts most likely increased during the COVID-19 pandemic due to government transfer programmes. The Government of Indonesia has introduced Grameen Bank-style credit products, and it offers three types of Islamic microfinance products, including a profit and loss sharing approach for credit and savings, Grameen-model Islamic microfinance and Islamic style microinsurance (Tambunan, 2017). In the Philippines, regular insurance companies and mutual benefit associations have begun to provide microinsurance and similar products to help low-income sectors to deal with vulnerability risks and catastrophic events (Llanto, 2017).

Use of agents or correspondents can help to overcome problems of distance and shortages of bank branches. For example, in India business correspondents can provide connectivity to financial services in remote and underbanked locations. However, business correspondents largely facilitate payments and have a limited role in opening deposit accounts or lending.

Innovative delivery technologies

Innovative delivery technologies, such as mobile phones, electronic money (e-money) and Internet banking, can also help to bridge distances and save time. Telephone banking has great potential as a result of the rapid diffusion of mobile phone ownership in many emerging economies. Telephone banking has enjoyed substantial success in the Philippines (ESCAP, 2014). However, use of mobile phones to pay bills in India is still quite limited at only about 2 per cent of the population, and the rate is much lower for the rural poor (Barua, Kathuria and Malik, 2017).

The development of e-money can make a substantial contribution to reducing the cost and inconvenience of making payments. Llanto (2017) notes that e-money accounts and e-money transactions have grown significantly in the past few years in the Philippines. For example, from 2010 to 2013, registered e-money accounts increased by 34 per cent to 26.7 million. Also, there are 10,620 active e-money agents performing cash-in/cash-out transactions. However, there are issues with regard to the identification and monitoring of money laundering and possible terrorism-related transactions. The developments of fintech represent the latest wave of such innovations and are described in greater detail in section 10 of the present study.

Innovative systems to enhance credit access

Informational asymmetries, such as the lack of credit data, bankable collateral and basic accounting information, discourage financial institutions from lending to MSMEs. Innovations to provide more information, such as credit databases, credit guarantee systems and rules to expand the kinds of eligible collateral, could substantially ease these asymmetries and increase the willingness of financial institutions to lend. Financial education for MSMEs could also encourage them to keep more complete and better records. Finally, the development of new investment vehicles, such as venture capital, specialized stock exchanges for MSMEs and new firms, and hometown investment trusts could expand the financing options of MSMEs.

Some Asian economies have been active in expanding and consolidating credit databases on households and MSMEs, but such efforts in most cases are still at an early stage, while such efforts have not yet started in other Asian economies. In Thailand, Tambunlertchai (2017) notes that the existing credit database of the Thai National Credit Bureau provide little credit information on low-income individuals and microenterprises. The issue of establishing a credit database for MSMEs in Thailand was raised in the SME Master Plan (2012–2016), and there have been talks, training sessions and workshops in preparation for the establishment of a credit risk database for MSMEs for the implementing agencies, such as the Thai Credit Guarantee Corporation, the Bank of Thailand and the Office of Small and Medium Enterprises Promotion.

Credit guarantees can also ease access to finance for MSMEs, although they confront a number of problems, in particular issues of moral hazard and high costs due to non-performing loans. In Thailand, the Thai Credit Guarantee Corporation offers credit guarantee products that assist MSMEs in obtaining commercial bank loans (Tambunlertchai, 2017). In Indonesia, loans to MSMEs under the programme for people/community business credit are guaranteed (70 per cent) by two insurance companies, Asuransi Kredit Indonesia and Perusahaan Umum Jaminan Kredit Indonesia, and by other companies which have voluntarily joined the programme (Tambunan, 2017).

It may be difficult for some MSMEs to access equity-related financing, but some Governments have introduced measures in this area. In India both the National and Bombay Stock Exchanges set up dedicated platforms for MSMEs, and Thailand has similar programmes. One alternative is to develop hometown investment trust funds to finance local projects. Hometown investment trust funds are described in Yoshino and Kaji (2013).

VII. STRATEGIES FOR FINANCIAL INCLUSION

The previous section has shown that countries approach the issue of financial inclusion from many angles. However, strategies are needed to set priorities and coordinate overall approaches of relevant organizations. Table 2 contains a summary of the major strategies of the countries in the present study. National-level strategies are most desirable, followed by strategies of the central bank and major ministries and/or financial regulatory bodies. In Asia, Indonesia, the Philippines and Thailand have the most well-articulated financial inclusion strategies, which are incorporated in their national economic planning strategies. Bangladesh, India and Sri Lanka have long-standing policies to promote financial inclusion through devices such as loan quotas for priority sectors, but they have not articulated a national strategy. At the regulatory level, the SME Master Plan of Thailand stands out, along with the Credit Policy Improvement Project of the Philippines.

Table 2. Strategies for financial inclusion

Country	National	Central bank	Ministries/ regulators	Private sector
Bangladesh	No national strategy; legal basis for Grameen Bank; establishment of Microcredit Regulatory Authority	Taka Ten Account for farmers; expansion of rural bank branches, refinancing, mobile banking, SME financing, and school banking		
India	Priority sector lending targets; Prime Minister's People Money Scheme bank account strategy; biometric identification program	Rural branch opening rules; establishment of innovative bank types; promotion of no-frills bank accounts; business correspondents; financial education		
Indonesia	Subsidized credit and bank lending targets for micro, small, and medium-sized enterprises and farmers; establishment of Grameen-type banks and other microfinance institutions	National Strategy for Financial Inclusion (with Ministry of Finance), payment system infrastructure; financial education; credit-related information; supporting regulation; campaigns; consumer protection	Ministry of Finance (see central bank)	
Philippines	Included in Philippine Development Plan 2011–2016 to increase confidence in financial system; expand offerings of financial products; financial education	Lead government institution to formulate specific financial inclusion strategies, numerous circulars	Department of Finance-National Credit Council: Credit Policy Improvement Project	

Table 2. (continued)

Country	National	Central bank	Ministries/ regulators	Private sector
Sri Lanka	10% bank loan target for agriculture; creation of Samurdhi banking societies	Branch opening regulations		Commercial bank campaigns to attract savings; services for overseas workers
Thailand	Aspects included in 11th National Economic and Social Development Plan: focus on SME finance, financial education		Ministry of Finance: National Strategy for Financial Inclusion; Office of Small and Medium Enterprises Promotion: Master Plan of SME Promotion	

Sources: ADBI (2014); BUCFLP (2014); Barua, Kathuria and Malik (2017); Kelegama and Tilakaratna (2017); Khalily (2017); Llanto (2017); Tambunan (2017); and Tambunlertchai (2017).

Abbreviations: MFI, microfinance institution; NBFC, non-banking financial company; NGO, non-governmental organization; SMEs, small and medium-sized enterprises.

Financial inclusion strategies need to balance the “three legs of the stool” – adequate regulation and supervision of microfinance institutions; consumer protection; and financial education. The first two are needed to address the issue of the lack of trust in financial institutions and inadequate information provided by them, while the last is needed so that consumers can make informed decisions about how to use the products and services available to them. These issues are described in the next two sections.

VIII. REGULATORY ISSUES FOR FINANCIAL INCLUSION

Efforts to promote financial inclusion raise many challenges for central banks and financial regulators, and creative responses to these challenges could contribute substantially to promoting financial inclusion. Traditionally, central banks and regulators have been sceptical of financial inclusion and have worried about possible negative impacts on financial stability, due to the higher credit risks and lack of documentation associated with small borrowers.

However, more recent literature highlights the potentially positive implications of financial inclusion for financial stability. Khan (2011) suggests three main ways in which greater financial inclusion can contribute positively to financial stability. First, greater diversification of bank assets as a result of increased lending to smaller firms could reduce the overall riskiness of a bank's loan portfolio. This would both reduce the relative size of any single borrower in a bank's overall portfolio and reduce its volatility. Adasme, Majnoni and Uribe (2006) found that the non-performing loans of small firms have quasi-normal loss distributions, while those of large firms have fat-tailed distributions, implying that the former have less systemic risk. Morgan and Pontines (2014) found that an increased share of lending to MSMEs tended to reduce measures of financial risk, such as bank Z-scores or non-performing loan ratios.

Second, increasing the number of small savers would increase both the size and stability of the deposit base, reducing banks' dependence on non-core financing, which tends to be more volatile during a crisis. Third, greater financial inclusion could improve the transmission of monetary policy, contributing to greater financial stability. Hannig and Jansen (2010) argue that low-income groups are relatively immune to economic cycles, so including them in the financial sector will tend to raise the stability of deposit and loan bases.

Therefore, regulators need to strike a balance between the need to promote financial inclusion while guaranteeing the stability of the financial system and protecting consumers. Table 3 contains a summary of the major features of regulations related to financial inclusion in the subject countries, including regulatory agencies (predominantly central banks), identification requirements, regulation of MFIs, regulations of lending (mainly interest rate caps) and consumer protection. Two broad conclusions have emerged from the varied country experiences seen in the present study: programmes to promote financial inclusion should be aligned with financial incentives to make their implementation more effective; and regulation of microfinance should be proportionate to the financial stability risks posed by MFIs.

Table 3. Financial inclusion regulatory measures

Country	Regulatory agencies	Identification-related measures	Regulation of MFIs	Lending regulations	Consumer protection
Bangladesh	Bank of Bangladesh, Microcredit Regulatory Authority, Insurance Development and Regulatory Authority		Licensing of MFIs over certain size can take deposits	Interest rate cap, deposit rate floor	
India	Reserve Bank of India, Micro Units Development and Refinance Agency Bank	Aadhaar biometric identification programme, linked to access to microaccounts	Licensed; can convert to small bank	Lending rate caps for banks, non-bank MFIs	Reserve Bank of India: Grievance Redressal Mechanism in banks; banking ombudsman system
Indonesia	Bank Indonesia, Financial Supervisory Agency and multiple others		Multiple regulatory entities	Interest rate caps: non-collateralized credit scheme for MSMEs (KUR) (22 per cent), 5–7 per cent for agriculture/energy programmes	National Consumer Protection Agency, Consumer Dispute Settlement Board, Credit Information Bureau

Table 3. (continued)

Country	Regulatory agencies	Identification-related measures	Regulation of MFIs	Lending regulations	Consumer protection
Philippines	Bangko Sentral ng Pilipinas (BSP), Insurance Commission	Easier identification requirements in cases where documentation is lacking	BSP regulates most entities; only rural banks and credit cooperatives can accept deposits	Only disclosure rules	BSP: Consumer Affairs Group; Securities and Exchange Commission; National Credit Council and National Anti-Poverty Council Microfinance Consumer Protection Guidebook
Sri Lanka	Central Bank of Sri Lanka		NGO-MFI's can register under various acts; not licensed; only cooperative societies and Samurdhi Banking Societies can take deposits		Consumer Affairs Authority; Voluntary Financial Ombudsman system; Consumer Affairs Council; Credit Information Bureau of Sri Lanka
Thailand	Bank of Thailand, Ministry of Finance, and multiple others		Various agencies depending on type of MFI, some not regulated at all	Interest rate cap of 28 per cent for specialized financial institutions, 15 per cent for non-formal lenders	Bank of Thailand: Financial Consumer Protection Centre

Sources: ADBI (2014); BUCFLP (2014); Barua, Kathuria and Malik (2017); Kelegama and Tilakaratra (2017); Khalily (2017); Llanto (2017); Tambunan (2017); and Tambunlertchai (2017).

Abbreviations: BSP, Bangko Sentral ng Pilipinas; MFI, microfinance institution; MSMEs, micro-, small and medium-sized enterprises; NGO, non-governmental organization.

Regulatory measures to promote access

Governments have relied on a number of different measures to promote financial access, but with varying degrees of success. In India, minimum quotas were set for so-called “priority sector loans” such as agriculture and MSMEs. Also the Prime Minister’s Task Force on MSMEs stipulated a target of 20 per cent year-on-year credit growth to micro- and small enterprises (Barua, Kathuria and Malik, 2017). In the Philippines, banks are required to allocate at least 8 per cent of their loan portfolio for micro- and small enterprises, and at least 2 per cent for medium-sized enterprises (Llanto, 2017). In Sri Lanka, the banking sector is required to allocate 10 per cent of credit to agriculture, and the central bank required banks to open two branches in rural areas for every branch opened in metropolitan areas (Kelegama and Tilakaratna, 2017). However, without adequate incentives, banks will not achieve the targets, they will cherry pick customers within target groups, and the poorer segments will remain unserved.

Identification requirements

Banking transactions are normally subject to strict requirements regarding identification, both in view of KYC norms and the need to monitor possible cases of money laundering or terrorist financing. However, it is often difficult for people in poorer rural areas to provide proof of identification. There are two main approaches to overcoming this obstacle: (a) relaxing identification requirements; and (b) establishing a national identification system. As shown in table 3, the Philippines has moved in the direction of relaxing identification requirements when such evidence is difficult to provide. However, in India, the ambitious programme of the biometric unique identity card or ‘Aadhaar’ is the sole KYC document for both account opening and access to other financial products. As of 31 October 2021, 1.317 billion Aadhaar numbers had been issued to the residents of India (Unique Identification Authority of India, 2021).

Regulation of microfinance institutions

Non-government MFIs have shown that their business models can achieve satisfactory investment results in many cases, as long as the risks and costs of servicing their customer base are adequately reflected in the rates they charge. Therefore, policies should aim to maximize the potential benefits of MFIs in terms of providing financial services at an affordable cost and in an efficient way.

The observation that loans to poorer households and MSMEs have less systemic risk than do loans to large firms provides the basis for the concept of “proportionate regulation” that calls for the regulation of financial institutions commensurate with their potential benefits and risks to the financial system. Compared to other countries

in the region, the Philippines has perhaps implemented this concept most thoroughly. The General Banking Act of 2000 and the National Strategy for Microfinance provided the regulatory framework for proportionate regulation and risk-based supervision adopted by the Bangko Sentral ng Pilipinas (BSP) (Llanto, 2017).

Table 3 shows that in India, Indonesia and Sri Lanka, many MFIs are not allowed to take deposits. In the Philippines, only rural banks and credit cooperatives are allowed to accept deposits (Llanto, 2017). In Bangladesh, MFIs of a certain size may be licensed and take deposits. Khakily (2017) finds that this development has improved both the efficiency of MFIs and their attractiveness to customers. It seems that more countries should consider an explicit licensing regime for MFIs to promote efficiency in the sector.

Interest rate caps

Table 3 shows that many countries impose caps on loan interest rates. In India, the charge on all bank loans given is linked to their base rate except on farm loans (300,000 Indian rupee) which are capped at 7 per cent. However, costs of making small loans to poor households and firms are inherently high, due to lack of economies of scale and information, and costs of access in remote areas. Therefore such limits can be counterproductive if they mainly act to limit supply. In this regard, the Consultative Group to Assist the Poor (2004) found that interest rate ceilings in 30 countries impeded the penetration of microcredit. The Reserve Bank of India in April 2014 removed the rate cap of 26 per cent on loans advanced by non-bank finance company MFIs, the only lenders eligible to lend through the microfinance channel (Barua, Kathuria and Malik, 2017).

In most cases, traditional money lenders are outside the range of formal financial institutions, which includes banks and MFIs. However, they still are an important source of credit for low-income households and MSMEs, and they pose a number of regulatory questions. Should they be registered or regulated? Should their interest rates be capped? How closely should they be monitored? Other issues related to disclosure and collection practices are discussed in the next subsection on consumer protection. Currently, in the Philippines BSP does not impose any interest rate caps on money lenders, relying instead only on disclosure requirements.

Consumer protection

Consumer protection programmes are seen as a necessary support for financial inclusion efforts, together with financial education and effective regulation and supervision of financial institutions. Consumer protection can help to address the issue of trust as a demand-side barrier to financial inclusion. Consumer protection programmes in the selected countries are at various stages of development. In

Thailand, the Bank of Thailand has the power to monitor consumer protection. In 2013, the Bank of Thailand opened its Financial Consumer Protection Centre to inform consumers about their rights and responsibilities, to prevent consumers from falling prey to fraudulent practices and to facilitate informed consumer decision-making.

IX.FINANCIAL LITERACY AND EDUCATION³

In the aftermath of the global financial crisis of 2007–2009, financial literacy and financial education are receiving increasing attention worldwide. There were sobering lessons, for example, in how the mis-selling of financial products contributed directly to the severity of the global financial crisis, both in developed economies and in Asia, which could partly be attributed to inadequate financial knowledge on the part of individual borrowers and investors. Financial education can be viewed as a capacity-building process over an individual's lifetime, which results in improved financial literacy and well-being. Financial education is also necessary to prepare for old age. Financial education for MSMEs is also very important. However, with some exceptions, Asian economies so far have only devoted limited resources to financial education.

Current situation of financial literacy in Asia

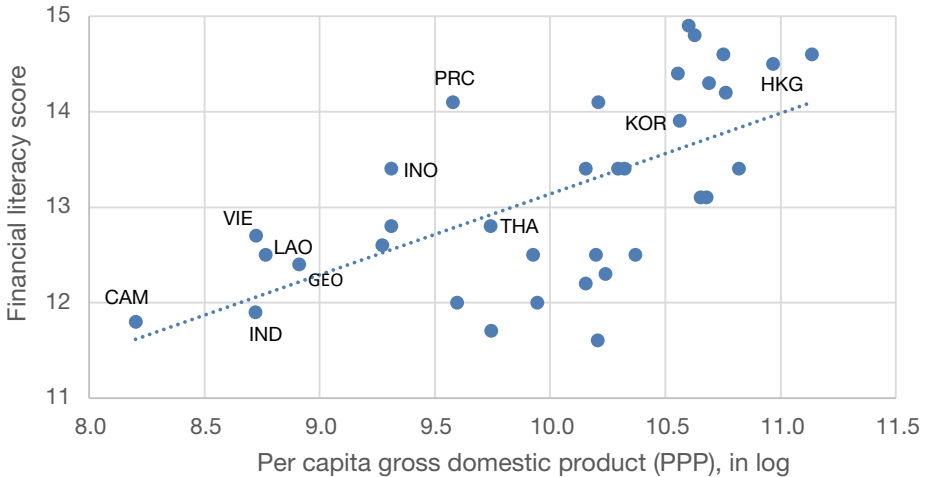
Mapping the current status of financial literacy (or financial capability) in Asia presents challenges to researchers and policymakers alike. It is a new area with limited data. The coverage of available surveys is relatively spotty, and methodologies and results are inconsistent. Only a limited number of Asian economies and target groups within them have been surveyed so far and their results vary widely. There is some relation between financial literacy and per capita income, but rankings differ significantly across different studies. Greater coverage of target groups (such as students, seniors, MSMEs and the self-employed) is needed.

Figure 3 shows the results of standardized financial literacy surveys conducted by the Organisation for Economic Co-operation and Development (OECD) International Network for Financial Education. The financial literacy score is calculated based on the number of correct answers to 21 questions regarding financial knowledge, financial behaviour and financial attitude (OECD, 2018). The vertical axis shows the financial literacy score and the horizontal axis shows per capita GDP. The figure shows a rough correlation of financial literacy with income levels, but there is still

³ This section is based on Yoshino, Morgan and Wignaraja (2015). Also, see the extensive discussion of issues related to financial education in Yoshino, Messy and Morgan (2016).

wide variation. More importantly, average financial literacy levels are relatively low even in high-income countries.

Figure 3. Financial literacy score and per capita gross domestic product



Sources: OECD (2016) and authors' estimates.

Abbreviations: CAM, Cambodia; GEO, Georgia; HKG, Hong Kong, China; IND, India; INO, Indonesia; KOR, Republic of Korea; LAO, Lao People's Democratic Republic; PPP, purchasing power parity; PRC, China; THA, Thailand; VIE, Viet Nam.

Current policies and gaps in financial education in Asia

There are still many policy gaps in Asia in the areas of financial literacy and financial education. Table 4 contains a summary of programmes, including national strategies, the roles of central banks, regulators and private programmes, and the channels and coverage of such programmes. The starting point for financial education programmes is to have a national strategy, but so far in Asia such strategies have been implemented only in India, Indonesia and Japan. Indonesia and Philippines are relatively strong compared to other countries in the area of financial education. The Philippines is in the process of finalizing its national policy. Central banks active in this area include the Reserve Bank of India, Bank Indonesia, BSP and Bank of Thailand. Financial regulators active in financial education include the Financial Services Authority of Indonesia. In Sri Lanka, however, measures to enhance financial literacy have been rather ad hoc in nature and there is no national policy on financial education.

Table 4. Policies and programmes for financial education

Country	National	Central bank	Other regulators	Private sector	Coverage	Channels
Bangladesh		Policy statement on financial literacy, but no specific strategy				
India	National Strategy on Financial Education launched by the Financial Stability and Development Council	Financial literacy project to enhance financial literacy among target groups; standardized literacy material		Bank literacy centers that work with microfinance institutions	School children, senior citizens and military personnel	Schools
Indonesia	Financial education one pillar of National Strategy for Financial Inclusion organized by Bank Indonesia and Ministry of Finance, "My Saving" programme (2010)	Financial education, "Let's go to the bank" campaign (2008)	Financial Supervisory Agency: National Financial Literacy Strategy		Students, children and youth, migrant works, fishermen, communities in remote areas, factory workers	Schools, media

Table 4. (continued)

Country	National	Central bank	Other regulators	Private sector	Coverage	Channels
Philippines	Included in Philippine Development Plan 2011–2016	Economic and Financial Learning Programme to promote public awareness of economic and financial issues				
Sri Lanka		Some activities	Some activities	Some activities		
Thailand		Financial education programs for individuals, SMEs	Government "Debt Doctor" programme, Office of Small and Medium Enterprise Promotion	Civil society groups, commercial banks, Bank of Agriculture and Agricultural Cooperatives, independent organizations, non-profit organizations	Generally small-scale programmes, except "Debt Doctor"	Media

Sources: ADBI (2014); BUCFLP (2014); Barua, Kathuria and Malik (2017); Kelegama and Tilakaratna (2017); Khalily (2017); Llanto (2017); Tambunan (2017); and Tambunlertchai (2017).

Abbreviations: SMEs, small and medium-sized enterprises.

The financial education programme in Indonesia is particularly well developed, as it includes cooperative efforts by the Ministry of Finance, Bank Indonesia and Financial Services Authority of Indonesia. They have developed a variety of programmes at both the national level and targeted at specific groups, including students and youth, migrant workers, fishermen, communities in remote areas and factory workers. One notable development was the TabunganKu ("My Saving") joint programme by

the Ministry of Finance and Bank Indonesia that helped promote savings in bank accounts. In this programme, the Government of Indonesia established a no-frills savings account with no monthly administration fees and a low initial deposit of 20,000 rupiah for commercial banks and 10,000 rupiah for rural banks.

In India, the Financial Stability and Development Council launched the National Strategy for Financial Education in 2012. The financial literacy programme of the Reserve Bank of India has teaching materials for a variety of target groups, including students, women, rural and urban poor, and older people, and these programmes are promoted through schools. Private banks have also developed literacy centres to work with MFIs (Myrold, 2014).

In the Philippines, BSP has been active in developing strategies for financial education, and it has issued a number of circulars in this regard. The Economic and Financial Learning Programme promotes awareness of economic financial issues. The programme targets specific audiences like schoolchildren, secondary and tertiary students, overseas Filipino workers, microfinance clients and others. The Credit Surety Programme is a trust fund financed by contributions of a provincial government and a cooperative in the same province to encourage financial institutions to lend to MSMEs in the province using the surety cover as a collateral substitute. The Consumer Affairs Group of BSP has been in charge of programmes for consumer protection, and the Monetary Board approved adoption of the Financial Consumer Protection Framework to institutionalize consumer protection as an integral component of banking supervision in the country (Tetangco, 2014). In addition, The National Credit Council and the Insurance Commission oversee financial education covering microinsurance in collaboration with the National Anti-Poverty Commission (Llanto, 2017).

X. FINTECH AND FINANCIAL INCLUSION

Fintech, which is the use of software, applications and digital platforms to deliver financial services to consumers and businesses through digital devices such as smartphones, is perceived to have great potential to promote financial inclusion, reflecting its ability to deliver innovative services online cheaply and efficiently. Fintech represents the latest wave of digital finance innovation and is connected with a wide range of new technologies and digital components including big data, machine learning and artificial intelligence, online platforms, distributed ledger technology and blockchain, and the Internet of things. In 2010, G20 members endorsed the Financial Inclusion Action Plan and established the Global Partnership for Financial Inclusion to coordinate and implement it. The Financial Inclusion Action Plan was updated at the 2014 G20 Leaders Summit in Brisbane. Acknowledging the importance of fintech, the Financial Inclusion Action Plan includes a commitment to implement the G20

Principles for Innovative Financial Inclusion under a shared vision of universal access (Bank for International Settlements and World Bank Group, 2016). The COVID-19 pandemic has increased the demand for fintech services, due to factors such as lockdowns, travel restrictions and the desire to minimize person-to-person contacts.

Major categories of financial services offered by fintech firms include:

- Payments and transfers; (e-commerce payments; mobile banking, mobile wallets; peer-to-peer payments and transfers; digital currency; cross-border transactions, including remittances and business-to-business payments)
- Personal finance (robo-advisors; mobile trading and personal financial management)
- Alternative financing (crowdfunding, peer-to-peer lending, and invoice and supply-chain finance)
- Other (insurance, etc.)

Payments and transfers and alternative financing have the most obvious potential to contribute to financial inclusion. Recognizing this potential, central banks and other financial regulators have adopted a number of approaches to encourage innovation in the sector while balancing risks to financial stability, including the use of regulatory sandboxes to assess risks and benefits of new services and special licensing regimes for fintech companies.

However, fintech introduces new risks and unexpected side effects as well, especially for less educated financial consumers. Fintech users face a multitude of potential risks, including the following:

- Phishing: When a hacker impersonates an institution to convince a user to divulge personal data, such as usernames or passwords, via email or social networks;
- Pharming: When a computer virus redirects a user to a fraudulent page to divulge personal information;
- Spyware: Malicious software on the personal computer or mobile phone of a user that transmits personal data of the user;
- SIM card swap: When someone poses as the user and obtains the user's SIM card and private data stored on it.

The digital footprint of fintech users, including information they provide to digital financial service providers, may also be a source of risk, even if it does not result directly in a loss, including:

- Profiling: Users may be excluded from access to certain services based on their online data and activities;
- Hacking: Thieves may steal personal data from social networks or other online platforms.

Due to easy access to credit enabled by fintech, consumers could also face potential problems of overborrowing or excessively high interest rates. Such risks can trigger unexpected and large losses when fintech providers are not regulated or regulation is weak. Overborrowing may also harm their credit rating (Morgan, Huang and Trinh, 2019).

Central banks and other financial regulators need to take a three-pronged approach to controlling these risks, including appropriate regulation of fintech companies, regimes for consumer protection and promotion of financial literacy, including digital financial literacy (Morgan, Huang and Trinh, 2019). Without such measures, consumers may lack trust in fintech products and services, and therefore be less willing to use them.

Table 5 contains a summary of recent regulatory measures affecting the fintech sector, including measures related to identification, e-payments, alternative finance and consumer protection. Central banks are the main regulators in most cases.

Table 5. Fintech regulatory measures

Country	Regulatory agencies	Identification-related measures	Payments	Alternative finance	Consumer protection
Brunei Darussalam	Autoriti Monetari Brunei Darussalam	e-Darussalam Account is a nationwide digital authentication key that provides access to online government services	No legal requirement to register corporate mobile payment services, but generally done in practice	No P2P lending firms yet. Equity crowdfunding platform operators must apply for a Capital Market Services License.	

Table 5. (continued)

Country	Regulatory agencies	Identification-related measures	Payments	Alternative finance	Consumer protection
Cambodia	National Bank of Cambodia (NBC)	Piloting digitized identification system	No regulations yet for cashless payments or e-commerce	P2P lending governed by the Law on Banking and Financial Institutions, primarily under the NBC. Law on the Issuance and Trading of Non-Government Securities is the primary legislation for equity crowdfunding, including both the issuing entity and platform.	
India	Reserve Bank of India (RBI), Securities and Exchange Board of India	Aadhaar biometric identification programme, linked to access to microaccounts	Must be regulated as payment bank, or put transactions through a regulated bank	Lending platforms treated as non-bank financial companies, must obtain a 'Certificate of Registration' from RBI. Equity-based crowdfunding remains a grey area.	RBI: Grievance Redressal Mechanism in banks; banking ombudsman system

Table 5. (continued)

Country	Regulatory agencies	Identification-related measures	Payments	Alternative finance	Consumer protection
Indonesia	Bank Indonesia, Financial Supervisory Agency (OJK)	Electronic identity card known as e-KTP	Five Bank Indonesia Initiatives for the Payment System under Decree No.18/73/DKom: national payment gateway; national standard for Indonesian Chip Card Specification; payment transaction processing; financial technology; and government to person social assistance	OJK regulations govern organization of technology-based P2P lending services and equity crowdfunding	National Consumer Protection Agency, Consumer Dispute Settlement Board, Credit Information Bureau
Lao People's Democratic Republic	Bank of Lao PDR	Piloting digitized identification system	Payment system operator and provider apply for business operation license		
Malaysia	Bank Negara Malaysia (BNM), Securities Commission Malaysia (SCM)	'MyKad' card incorporates both photo identification and fingerprint biometric data, but not verifiable	Digital payments governed as a payment instrument. Issuers are required to obtain prior approval from BNM	SC has appointed six operators to run P2P platforms. Equity crowdfunding firms regulated by SCM	

Table 5. (continued)

Country	Regulatory agencies	Identification-related measures	Payments	Alternative finance	Consumer protection
Myanmar	Central Bank of Myanmar	Digital identification regarded as national priority	Regulated either as (a) mobile banking as a traditional bank or by a Fintech company in conjunction with a traditional bank; or (b) mobile financial service, which is operator-led	P2P lending and equity crowdfunding currently not regulated	
Philippines	Bangko Sentral ng Pilipinas (BSP), Securities and Exchange Commission (SEC)	Phil-ID will collect information and biometric data including iris scans, fingerprint and facial images	BSP Circular No. 649, Series of 2009 provides guidelines for issuers as a retail payment medium. Issuers may be banks or non-banking financial institutions registered as a money transfer agent.	No specific regulations governing online P2P lending. Lending companies are under SEC. Rules covering the operation and use of equity and lending-based crowdfunding only apply to registered persons.	BSP: Consumer Affairs Group; SEC; National Credit Council and National Anti-Poverty Council Microfinance Consumer Protection Guidebook
Singapore	Monetary Authority of Singapore	Digital identification serves as an official identification document, security measures are in place to protect user identity	New Payment Services Bill aims to streamline existing regulations of payment services	Platforms which allow P2P-lending to non-accredited natural persons require a license under the Moneylenders Act. Equity crowdfunding platforms must hold a Capital Market Services license.	

Table 5. (continued)

Country	Regulatory agencies	Identification-related measures	Payments	Alternative finance	Consumer protection
Thailand	Bank of Thailand (BOT), SEC	Digital identification system allows institutions to electronically identify and authenticate end users, but not mandatory	Licensing of payment systems and other services such as systems for fund transfer handling, clearing or settlement for retail fund transfers, electronic cards services, e-money service and bill payment service	BOT regulates P2P lending platforms. SEC oversees the operation of crowdfunding platforms.	BOT: Financial Consumer Protection Centre
Viet Nam	State Bank of Vietnam, State Securities Commission (SSC)	Piloting digitized identification system	Third-party payment service providers (non-banks) licensed	No official legal framework for P2P lending. Equity crowdfunding platforms must obtain a license from SSC.	

Sources: CCAF, ADBI and FinTechSpace (2019).

Abbreviations: BNM, Bank Negara Malaysia; BOT, Bank of Thailand; OJK, Financial Supervisory Agency; NBC, National Bank of Cambodia; RBI, Reserve Bank of India; SCM, Securities Commission Malaysia; SEC, Securities and Exchange Commission; P2P, person to person; SSC, State Securities Commission.

XI. REGULATOR INNOVATIONS IN RESPONSE TO COVID-19 TO SUPPORT FINANCIAL INCLUSION

The COVID-19 pandemic has underlined the benefits of using fintech services. It became more difficult to travel to banks or other physical outlets to do financial transactions because of travel restrictions, lockdowns and concerns about possible

infection. Governments also greatly expanded the use of online transfers to deliver financial aid more efficiently and cheaply to households and firms. In light of this, central banks and other financial regulators took numerous steps to support the use of fintech services.

One step was to ease requirements for KYC procedures. This included facilitating or permitting electronic KYC processes where they had not been permitted previously, or simplifying KYC processes and practices. Examples of measures included digital on-boarding (e.g. facilitating or permitting the use of digital identities); permission for the use of digital/electronic signatures; simplified and/or digitalized customer due diligence checks; and use of digital documents (World Bank and CCAF 2020).

Central banks provided emergency liquidity facilities to financial institutions, including fintech firms. They also provided concessional funding for commercial banks and credit institutions for lending to firms, including to MSMEs and start-ups (World Bank and CCAF 2020).

Business continuity planning measures have been a key area of focus for central banks and financial regulators in response to COVID-19. Central banks have been more focused on business continuity planning for banks than the fintech sector, while other financial regulators may be more concerned about the threats to the continued operation of fintech companies during the pandemic.

Fintech firms perceived increases in cybersecurity risks during the COVID-19 pandemic period associated with increased use of fintech. Indeed, during the fintech firms reported that they have on average experienced a 15 per cent increase in cybersecurity breaches during the pandemic (CCAF, World Bank and World Economic Forum, 2020). In light of these risks, central banks also enhanced requirements or controls, strengthened cybersecurity oversight and supervision, and made recommendations for cybersecurity protocols (World Bank and CCAF, 2020). Some regulators have gone further to draft cybersecurity guidelines while others are developing comprehensive regulatory frameworks.

Central banks and regulators have also adopted a more ‘digital’ approach to regulation. This includes shifting from physical processes, to using a “digital first approach” to activities such as licensing, correspondence, meetings, inspections, virtual annual general meetings and electronic submission of regulatory forms (World Bank and CCAF, 2020).

Finally, central banks and regulators have encouraged the use of fintech services by lowering the costs of payment services to consumers, especially in countries where use of mobile money is widespread. This included waiving or reducing transaction fees and increasing transaction limits or thresholds. Examples include increases

in daily maximum account balance and wallet limits, and increases in contactless payment and mobile money limits. Of course, fee reductions hurt the profitability of banks and fintech firms, so are generally temporary. In the area of digital lending, providers were authorized to issue credit cards and fund operations with resources from relevant development banks to target the underserved (World Bank and CCAF, 2020).

XII. CONCLUSIONS AND WAY FORWARD

Central banks have already been active in promoting financial inclusion, often nested within national financial inclusion strategies. This reflects a number of motivations, including the desire to promote economic and financial development, but also to reduce cash transactions in order to increase transparency and reduce channels for money laundering and terrorism finance. At the same time, they have to balance encouragement of financial innovation to promote financial inclusion with the need to maintain financial stability, especially in the banking sector, adhere to AML/CFT requirements, and protect consumers. These considerations are also reflected in their approach to promoting and regulating fintech firms.

Such activities have included innovations regarding identification, KYC and AML/CFT; innovations regarding products and access; differentiated regulatory approaches for innovative financial institutions aimed at financial inclusion; and differentiated regulatory approaches for fintech firms. Central banks have developed regulatory sandboxes to test innovative products and services, and have developed tailored licensing regimes for financial inclusion firms and fintech firms.

Financial innovation requires greater knowledge and experience on the part of consumers in order to make effective use of financial products and avoid losses and other risks. Therefore, central banks have supported financial education programmes to promote financial literacy. The increasing importance of fintech points to the need for programmes to promote digital financial literacy as well. However, this area is still in its infancy and requires further policy support (Morgan, Huang and Trinh, 2019).

The COVID-19 pandemic has underlined the benefits of using fintech services. In response, central banks and other financial regulators need to take further steps to support the use of fintech services, including the following: promoting digitalization and simplification of KYC, identification and related requirements; strengthening

cybersecurity measures and other consumer protection measures; and supporting innovation in digital lending while maintaining financial stability.

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