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Driving Inclusive and Sustainable Digital Transformation: Managing the Risks of Financial Technology Misuse Among Low-Income and Vulnerable Communities in ASEAN

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Executive Summary:

Financial technology (fintech) offers a promising opportunity to boost poverty eradication by improving financial access for marginalised groups and micro, small, and medium enterprises (MSMEs) in ASEAN Member States (AMS). However, the target populations for poverty eradication programs face an elevated risk from fintech misuse and often have an insufficient level of financial literacy to use fintech appropriately. Fintech misuse across AMS involves transnational criminal networks. Levels of fintech adoption, fintech ecosystem maturity, and financial literacy differ between AMS. These differences are exacerbated by gender and age. ASEAN must take specific and explicit action to enhance digital and financial literacy among vulnerable groups, such as microbusinesses, the poor, rural communities, the elderly, and women, which will require specific actions to close the gaps in preparedness between AMS, and to mitigate how emerging technologies (e.g., artificial intelligence) can facilitate fintech misuse.

Recommendations:

To addressing poverty in ASEAN, AMS should:

- Mainstream discussions on fintech misuse and risks to vulnerable groups, through better cross-sectoral and cross-Pillar coordination.
- Accelerate initiatives to strengthen financial and digital literacy for vulnerable groups, specifically ensuring that these initiatives reach rural communities.
- Build a dedicated framework to address the risks and challenges of fintech, specifically by enhancing cross-border law enforcement.
- Develop an official framework focused on developing regional and national actions to collectively address fintech-related transnational crime.
- Strengthen multi-stakeholder engagement and collaboration to boost the capacity of fintech providers and users, ensure the compliance of fintech service providers with standards and regulations, and educate users on the safe fintech use.



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1 Fintech and Poverty Eradication in ASEAN

ASEAN has recognised the potential for digital transformation for poverty reduction. According to ASEAN's Consolidated Strategy on the Fourth Industrial Revolution, convergence of the physical and digital worlds is expected to boost connectivity, empower ASEAN's peoples, help economies grow, improve their livelihoods, and increase competitiveness (ASEAN, 2021a). Further, the ASEAN Framework Action Plan on Rural Development and Poverty Eradication 2021-2025 aims to harness the opportunities offered by digital transformation for rural populations.

Fintech is one of the most promising digital transformations to aid poverty eradication in ASEAN. Total fintech funding in ASEAN reached USD 5.1 billion in 2022, with Singapore and Indonesia accounting for 81% of the total, and the Philippines, Malaysia, Thailand, and Vietnam accounting for 7%, 5%, 5%, and 1%, respectively (UOB, PwC Singapore, & Singapore Fintech Association, 2023).

Fintech expansion has promoted financial inclusion by increasing financial access for vulnerable groups, especially microbusinesses, the poor, rural communities, and women. Similarly, increased financial inclusion has improved livelihoods and increased economic growth (Kanungo & Gupta, 2021; Ermut, 2022; Ong, et al., 2023). Further, fintech has been used more frequently by ASEAN's MSMEs to supplement bank loans, while one in five women have used fintech to obtain loans, ranking the medium just below commercial banks as a formal lending source (World Economic Forum, 2022).

For example, PT Amartha Mikro Fintek has aided MSMEs in rural Indonesia through peer-to-peer lending, facilitating over USD 500 million in loans as of 2021 while offering faster financing than conventional banks (Suryani, et al., 2023). Further, peer-to-peer lending has enhanced economic productivity in rural communities by boosting sustainable entrepreneurial capital lending and helping young people in rural areas to pay for education (Asian Development Bank, 2021).

However, digital transformation also presents risks to fintech service providers and users in ASEAN. For example, IBM reported that cyberattacks such as data breaches cost ASEAN countries an average of USD 3.05 million in 2023, up 6% from 2022. This has increased costs for ASEAN's financial service providers (Onag, 2023). Risks from the market, political, regulatory, and technological environments have also limited the growth and penetration of ASEAN's fintech sector (CCAF, ADBI, & FinTechSpace, 2019; Loo, 2019; Wijaya, 2023).

Despite fintech's potential risks, ASEAN has underscored the importance of financial literacy in promoting financial inclusion. Financial literacy has been linked directly to customer protection and financial inclusion (UNCDF, 2023). Fintech providers also have been identified as critical stakeholders for improving financial literacy (Alliance for Financial Inclusion & the ASEAN Working Committee on Financial Inclusion, 2021).

However, risk identification has focused on fintech service providers, as opposed to users, particularly those excluded from the financial sector. This is evident in how service providers have focused on financial sector stability (CCAF, ADBI, & FinTechSpace, 2019; Loo, 2019; Bao, et al., 2023). Discussion of fintech use by poor and vulnerable communities have focused on low uptake and the assumption that increased fintech adoption would lead automatically to increased financial inclusion (Bao, et al., 2023). There has been insufficient discussion of the risks to these communities. ASEAN must broaden its existing top-down approach and consider the risks of fintech from their perspective.

2 Online Loan Sharks

Fintech users in AMS are at risk from fraudulent, illicit, and unethical online lenders. Users, especially those from marginalised communities, have been targeted by online lending apps with offers of easy-to-obtain, short-term loans, as well as by predatory debt collectors who have used blackmail to prompt borrowers to seek additional loans to make repayments, trapping them in a debt cycle (Manabat, 2023; Vicheika & Duncan, 2022; Engly & Yon, 2022). Marginalised, low-income communities also have been extremely susceptible to fraudulent or unethical providers, given the low barriers required to access credit, usurious interest rates, the misuse of consumer personal data, and debt collection practices based on blackmail and intimidation (Beeby, 2019; Frontier Myanmar, 2023).

Such cases represent the alarming rise of cybercrime incidents in the ASEAN region. While the ASEAN region is deemed to be among the fastest growing digital markets in the world (Google, et al., 2023), cybercrime in the region increased by 82% in the span of one year from 2021 to 2022 (Cheng & Chow, 2023). Moreover, IBM Security found that the cost of an instance of data breach in the region reached a new high in 2023, amounting to USD3.05 million with a 6% increase from the previous year, wherein the financial sector would suffer the most loss which would amount to USD 4.81 million per breach (Raj, 2023). This is compounded by the fact that the cybercrime landscape in the ASEAN region is noted to have offenders who operate both transnationally and locally (Lusthaus, 2020). Notwithstanding these data, digital financial services remain an attractive option for end-users due to low barriers for access.

Low barriers for obtaining online loans has incentivised over-indebtedness, e.g., people with limited repayment capacity have taken on additional loans due to their easy accessibility. For example, in Cambodia, 3.6 million households were reported to have held 2.8 million loans that totalled USD11.8 billion, with the average loan size exceeding the national average household income (Vicheika & Duncan, 2022). Meanwhile the monthly interest rate charged by online lending applications in Cambodia can top 80% (Engly & Yon, 2022). In Indonesia, peer-to-peer lending platforms have charged 1%-2% daily interest with insufficiently transparent policies on fees and penalties (Ajisatria, 2019).

Further, inadequate consumer data protection has enabled fintech platforms to misuse sensitive personal information and threaten or persecute borrowers when collecting debts (Ajisatria, 2019). This risk is elevated for populations with precarious employment or housing; findings from Indonesia show that teachers, workers who were laid off, and housewives were most susceptible to fraudulent online lenders (Insight, 2021). In 2023, Indonesian media reported that there were at least 25 suicides that were linked to online lending victims, showing the issue's severity (Ananda, 2023).

Fintech has also been misused by online loan sharks who operate transnationally, which has posed difficulties for law enforcement that require cooperation at the regional level (Viet Nam News, 2023; Alkhatib, 2023). In Viet Nam, for example, one transnational crime network ran an online loan shark ring that made more than VND20 trillion (USD 800 million) in loans and booked profits of VND8 trillion (USD320 million). The transnational nature of technology underscores the importance of a comprehensive approach to connect transnational crime prevention, financial inclusion, and digital transformation.

3 Case Study: Indonesia

Seeking money to support her family, A.M. (initials, 27 years old), a non-permanent teacher from Semarang, Indonesia, received a cell phone advertisement offering loans of IDR 5 million (around USD310). She applied and was approved for an IDR 3.7 million loan. After five days, she was targeted by a debt collector who demanded immediate repayment and threatened to make public her personal information. In fear, she repaid with a loan from another online lender, and continued to seek additional online loans to pay the subsequent debts. AM accumulated total debts of IDR 206 million before going to police. (Purbaya, 2021).

4 Case Study: Myanmar

Mrs. M., a 32-year-old resident of Yangon, applied for a loan using the Pigeon Loan app, which during installation requested and was given unnecessary permissions to her cell phone. Although she requested K20,000 (around USD10), Mrs. M. received K14,000. Surprised by the loan's increasing interest rate, she uninstalled the app after repaying the loan in full within a week. Subsequently, Mrs. M.'s mother was blackmailed into making a K50,000 (USD24) payment to prevent public release of her daughter's personal information. Mrs. M.'s mother was asked to make payment using a different app, Wave Pay. When Mrs. M. called Wave Pay and asked for the return of her mother's money, she was asked for an additional K100,000 (USD48), with the lender threatening to release her personal information and photos to the public if she did not comply. Mrs. M. filed a complaint with the police, who she found unhelpful (Frontier Myanmar, 2023).

While digital transformation and financial inclusion have the potential to boost poverty eradication initiatives in ASEAN, the ensuing risks from fintech must be managed or mitigated. Given that the level of maturity and adoption rates for fintech differ between AMS (Huong, et al., 2021), it is clear that there are different levels of national ability when addressing related risks, particularly for users from marginalised communities.

However, the risks stemming from fintech use or misuse have manifested in different ways, given that gender and age have been found to influence people's likelihood in adopting fintech. A more developed fintech ecosystem might produce larger gaps in the adoption of fintech, as females and the elderly are less likely to adopt services such as mobile money (Imam, et al., 2022). The gender gap in the adoption of fintech might be attributed to issues such as aversion towards technology, gender-based discrimination (which women might experience as they interact with financial services), and certain social norms (Chen, et al., 2021). What is needed is a more comprehensive understanding of the complexity of several factors, such as boosting digital financial inclusion through fintech; fintech's interconnections with people's behaviour; the nature of existing legal, political and social contexts; as well as fintech's intersection with digital transformation, financial inclusion, and transnational crime.

Ignoring how vulnerable communities, such as microbusinesses, the poor, rural communities, the elderly, and women, experience risks from fintech has hindered efforts to realise the promises of digital transformation for everyone in the region and negatively affected regional efforts to leave no one behind as AMS pursue progress in digitalisation.

5 Assessing ASEAN's Fintech Framework

A review of relevant documents related to fintech was initiated to identify ASEAN's awareness of risks from the rapid growth of fintech services, and especially digital loans, which have often outpaced development of national- and regional-level measures to mitigate unintended consequences. The review covered formal statements, frameworks, masterplans, policy notes, press releases, and other documents for sectors that included digital transformation, poverty eradication, rural development, and transnational crime.

According to the review, fintech's negative impacts were rarely identified as a specific concern, nor were concerns raised explicitly about digital loans or other fintech services. Mentions were typically limited to startups or considered the developmental and regulatory frameworks related to the fintech sandbox (a controlled testing mechanism for fintech activities). While the review identified a general awareness of the need for consumer protections and financial literacy, there was no explicit focus on the fintech industry sector.

However, identity fraud was identified explicitly as a risk to consumers in ASEAN, which subsequently encouraged measures to combat the practice at the AMS level. ASEAN's vision has been to increase financial literacy and bolster consumer protections to help reduce people's vulnerability to online scams, and to encourage people's trust and acceptance of digital financial products and services (UNCDF, 2023). However, progress on ensuring consumer financial protections will depend on individual AMS efforts, which must be encouraged and facilitated by ASEAN.

Some ASEAN documents did address issues relevant to fintech, albeit indirectly. The ASEAN ICT/Digital Masterplan (ASEAN, 2010, 2015), for example, promoted consumer-focused risk mitigation in the financial sector. In its previous iterations, which promoted digitalisation to foster economic integration, the ASEAN ICT Masterplan presented digital security as a way to facilitate regional trade. Efforts to enhance inclusivity were typically linked to improving access to digital infrastructure and services.

The ASEAN Digital Masterplan 2025 (ASEAN, 2021b) also framed security and trust more comprehensively by highlighting measures to enhance consumer protection and the digital operation of enterprises in the region, particularly with respect to the governance of data flow and protections. This was demonstrated by the ASEAN Framework on Personal Data Protection (ASEAN, 2016) and ASEAN Framework on Digital Data Governance (ASEAN, 2018), which provided frameworks to harmonise national regulations on data governance and protection.

Building on this, ASEAN facilitated seamless regional integration to create value for businesses and consumers by endorsing the Implementation Guide of the Joint Guide to ASEAN Model Contractual Clauses (MCCs) and EU Standard Contractual Clauses (SCCs) (ASEAN & European Commission, 2024), which identified best practices for businesses to implement when transferring data between ASEAN and the EU on the basis of the MCCs and SCCs.

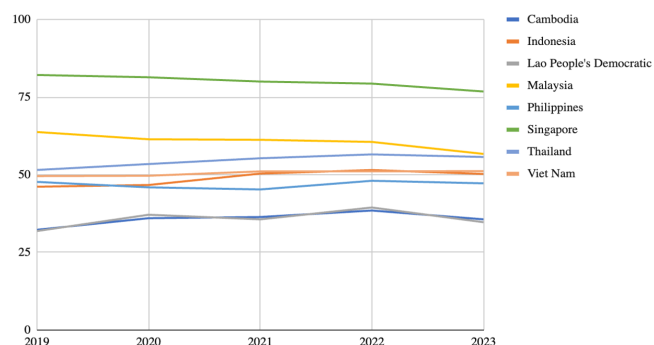
Further, noting the importance of trust and confidence to digital ecosystems, ASEAN commenced operationalisation of the ASEAN Regional Computer Emergency Response Team (CERT) to further strengthen regional cyber resilience, including through sharing information, exchanging best practices, and promoting capacity-building initiatives to bolster the effectiveness of regional incident response capabilities. Increased focus was given to improving people's capacity and skills to mitigate risks from the financial sector, as stated by the ASEAN Digital Masterplan 2025's Enabling Action 8.4, on encouraging the deeper adoption and use of vertical digital services (ASEAN, 2021b).

Despite these measures, ASEAN has not adequately addressed the risks arising from the rapid adoption of fintech services, particularly for the region's vulnerable communities, such as microbusinesses, the poor, rural communities, the elderly, and women. Although the importance of fintech has been recognised, there has been limited recognition of the unintended consequences of digital loans or online lending, such as the digital loan sharks who have had a catastrophic impact on the livelihoods of the poor and vulnerable in every AMS. Digital loans and online lending remain an excellent instrument for financial inclusion that have benefitted the poor by providing access to capital. However, the impact of these instruments has not always been beneficial. Increasing financial literacy is an important way to insulate low-income and marginalised communities from fintech misuse.

Even so, developing digital and financial literacy is a long process. ASEAN cannot assume that the risks posed by digital loan sharks and other fintech misuses will subside automatically as AMS increase their respective digital literacy rates. As several ASEAN documents have noted, improvements must be coupled with increased protections for personal data and stronger cybersecurity to bolster the resilience of vulnerable populations to fintech problems and misuse.

This is illustrated by the five-year scores of the Network Readiness Index (NRI) (see Graph 1). NRI is a national-level index that assesses network development and a nation's readiness for digital transformation. It is trusted measure of how individuals, governments, and societies can adapt to digital changes. Graph 1 shows that efforts to improve readiness have not had substantial positive effects in the short term. Despite their commitments to increase digital literacy, AMS have not booked substantive progress as recorded by the NRI.

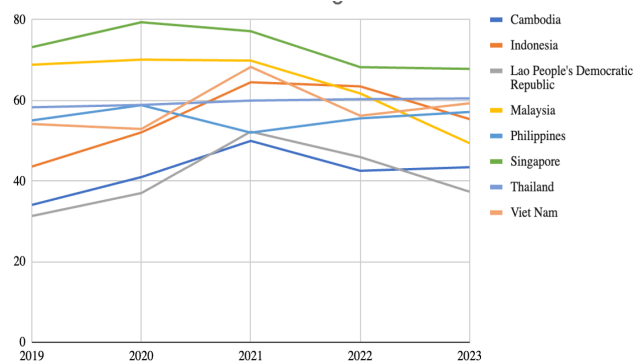
Figure 1: Network Readiness Index 2019-2023 in ASEAN



Source: Authors' analysis of The Network. Readiness Index 2019, 2020, 2021, 2022, 2023 (Dutta & Lanvin, 2019, 2020, 2021, 2022, 2023)

A closer look at the indicator that best correlates with individual digital literacy (i.e., "Individuals") shows a similar picture, albeit with greater fluctuations. The "Individuals" indicator assessed individual use of digital technology and individual engagement with the digital economy. Between 2019 and 2021, the "Individuals" indicator was comprised of five sub-indicators (2019-2021): a count of active mobile broadband subscriptions, ICT skills in the education system, use of virtual social networks, tertiary enrolment; and the adult literacy rate. Inclusion of "AI talent concentration" sub-indicator in the "Individuals" indicator in 2022 significantly dragged down the scores of several AMS, indicating that improved digital literacy rates must keep pace with rapid technological development. The potential for AI-facilitated misuses of fintech must be recognised (Erkh, 2024).

Figure 2: Network Readiness Index –"Individuals" Score 2019-2023 for AMS



Source: Authors' analysis of The Network. Readiness Index 2019, 2020, 2021, 2022, 2023 (Dutta & Lanvin, 2019, 2020, 2021, 2022, 2023)

Financial literacy is the foundation of financial inclusion (Grohmann, et al., 2018). It serves as the basis for individual and enterprise financial decisions, informs their ability to participate in the financial market, and facilitates their ability to access adequate financial services. The advancement of fintech adds further complexity, given that groups such as women, rural dwellers, and low-income groups are at an elevated risk of exclusion from the financial system due to late adoption (Morgan, 2022).

Further, ascertaining financial literacy rates in AMS remained challenging, despite the existence of measures such as MasterCard's Index of Financial Literacy, which gauged the performance of Asia-Pacific nations in 2013. Further, national financial institutions in several AMS, such as the Bank of Thailand (n.d.), the Central Bank of the Philippines (Bangko Sentral ng Pilipinas, 2019), and Indonesia's Financial Services Authority (*Otoritas Jasa Keuangan*, 2022), have also released reports or surveys on their national financial literacy and inclusion rates. Meanwhile, the Asian Development Bank (ADB), has also provided reports focusing on financial literacy and calculated rates of financial literacy in several AMS, including Cambodia, Indonesia, Lao PDR, Malaysia, the Philippines, Thailand, and Viet Nam (Morgan & Trinh, 2017, 2019; Askar, et al., 2020; Moenjak, et al., 2020; Kodama, et al., 2024). However, these measurements are not regularly updated, while innovations in fintech and its misuse develop rapidly. This points to the elevated difficulty of comprehending the extent to which financial literacy has progressed in ASEAN.

A more specific focus on how to mitigate the risks and threats of fintech misuse is needed, and this must be based on a comprehensive understanding of how misuse affects marginalised communities. Further consideration and tracking relevant data should be a priority for ASEAN.

6 Recommendations

Six recommendations to enhance efforts in addressing the risks of fintech misuse have been identified.

First, discussions on the misuse and negative aspects of fintech should be mainstreamed and recognised by ASEAN. More explicit recognition and endorsements, especially from ASEAN's ministerial bodies, are needed to foster regional cooperation to manage fintech risks. Relevant statements from ministerial meetings are missing an explicit and systematic recognition of the risks of fintech misuse. To encourage actions by stakeholders and AMS, risks should be discussed by bodies such as the ASEAN Digital Ministers Meeting, ASEAN Finance Ministers Meeting, the ASEAN Ministers Meeting on Rural Development and Poverty Eradication, and the ASEAN Ministerial Meeting on Transnational Crime, among others.

Second, ASEAN should enhance cross-sectoral and cross-Pillar coordination to account for the complex connections between fintech risk management and financial literacy. While ASEAN has emphasised digital transformation, coverage of fintech has been sporadic. Remarkable progress was achieved with the ASEAN Cybersecurity Cooperation Framework, which discussed how to overcome barriers to cross-sectoral and cross-Pillar coordination to enhance security and resiliency to boost fintech use. The Framework's context for understanding security and trust issues mirrors the ASEAN Digital Masterplan. However, neither document defined explicit or sufficient measures to mitigate the risks of fintech misuse. ASEAN must prioritise concrete measures to promote security, safety, and trust in financial services and fintech to better advance financial inclusion.

Third, ASEAN must accelerate initiatives to strengthen financial and digital literacy rates for high-risk groups that are vulnerable to fintech misuse, particularly by enhancing financial education. National financial inclusion strategies should acknowledge that financial education and other interventions to improve digital literacy will require sustained effort at all levels, including at the school, enterprise, and national levels (Yoshino, et al., 2015). Existing regional and national policies and initiatives must be supplemented by more targeted measures due to the urgency of the fintech misuse, as illustrated by this brief's case studies. Such measures must address the unique challenges posed by rural populations. Research finds that populations with lower levels of participation in agriculture are more likely to participate in financial education (Zhang & Xiong, 2020). This suggests that ASEAN must address the unique concerns raised by members of the agriculture sector as it works to promote financial education and enhance financial literacy in rural areas.

Fourth, given fintech's transnational nature, AMS should strengthen multi-stakeholder engagement and collaboration by promoting information sharing and exchanging knowledge to address cross-border and domestic challenges stemming from fintech misuse. Information sharing is needed to identify and record fintech risks and specific misuses of fintech at the transnational and national levels. While several AMS maintain databases of illegal and unregulated fintech services, a single database that tracks risks at the regional level is essential to counter transnational fintech crimes and misuses.

Fifth, ASEAN should develop a framework dedicated specifically to addressing the risks and challenges of fintech use that is based on the assumption that the vulnerable groups targeted by financial inclusion programs (e.g., populations living in poverty and marginalised groups) are at increased risk from fintech misuses. ASEAN will benefit by identifying specific regional and national actions that will contribute to tackling transnational crime associated with fintech misuse. Such a framework should offer guidance on developing a cross-sectoral and cross-Pillar approach.

Sixth, ASEAN should enhance cross-border law enforcement measures to address fintech misuse. If ASEAN can identify collectively risks at a transnational level, law enforcement can act preventatively. Relevant law enforcement agencies must also be encouraged to engage with high-risk groups to enhance their digital skills and level of financial literacy to better understand the risks associated with the use and misuse of fintech.

Finally, users and fintech service providers should engage with relevant government financial authorities to ensure fintech's safe and beneficial use. Fintech providers must collaborate with governments to ensure user data security and comply with domestic and international regulations and technical standards. Fintech users must be educated to understand the fintech services they use and ensure their chosen fintech service providers operate legally based on information provided by the government, read carefully loan agreements, and pay instalments promptly.

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