Embracing
Open Finance in Southeast Asia

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Contents

Executive Summary

Southeast Asia's financial institutions are discovering new digital-first commercial models. Digitization is blurring the boundaries of finance and disrupting the core business model of banks. Open finance – as an extension of open banking permissioned data-sharing – allows for a wider range of financial products and services to be created. Banks are poised to take advantage of new banking and revenue models enabled by open finance.

This paper identifies the commercial opportunities for banks in open finance and explores how banks and other financial service providers can overcome challenges to open finance adoption.

Open finance offers new growth and distribution opportunities for banks. With open finance, banks can tap into the massive digital finance opportunity, and find new ways to create value. Banks are well-placed in their competitive advantage with regulatory barriers, customer data, brand value, and core IT infrastructure, and often a broad branch/agent distribution network. They can leverage their competitive advantage and partner with third party providers to expand access to underserved customers, provide new product and service offerings and deliver quality customer experience.

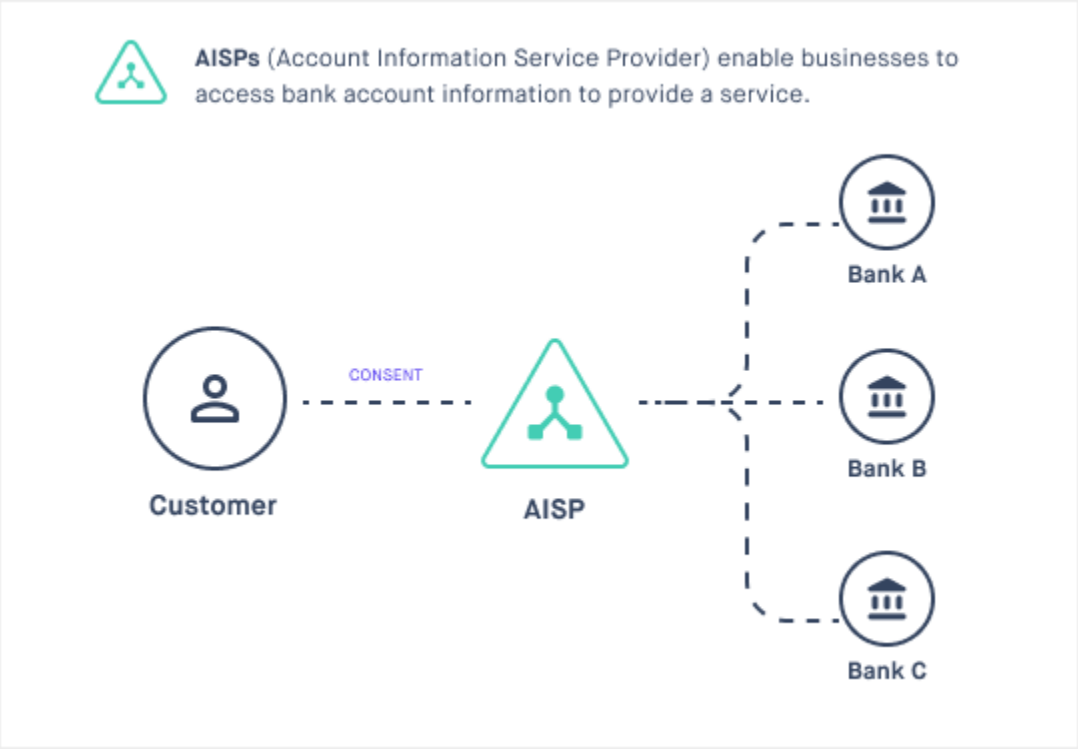
However, banks need to ensure that key questions around commercial viability are addressed by realigning operating models and organizational structures and advocating a bottom-up industry led open finance policy. Open finance regulations in ASEAN countries are nascent and evolving based on industry input, as more banks and financial technology companies see business opportunities in open finance products. Banks can start by articulating a clear business case for open finance, especially low-hanging fruits such as direct digital payments, digital onboarding, and identity. As banks explore new products and business models for open finance, they also need to ensure that their technology systems and operating models are adapted for digital readiness.

This paper will conclude with suggesting how banks in Southeast Asia can embrace open finance with practical next steps.

What is open finance, and why does it matter?

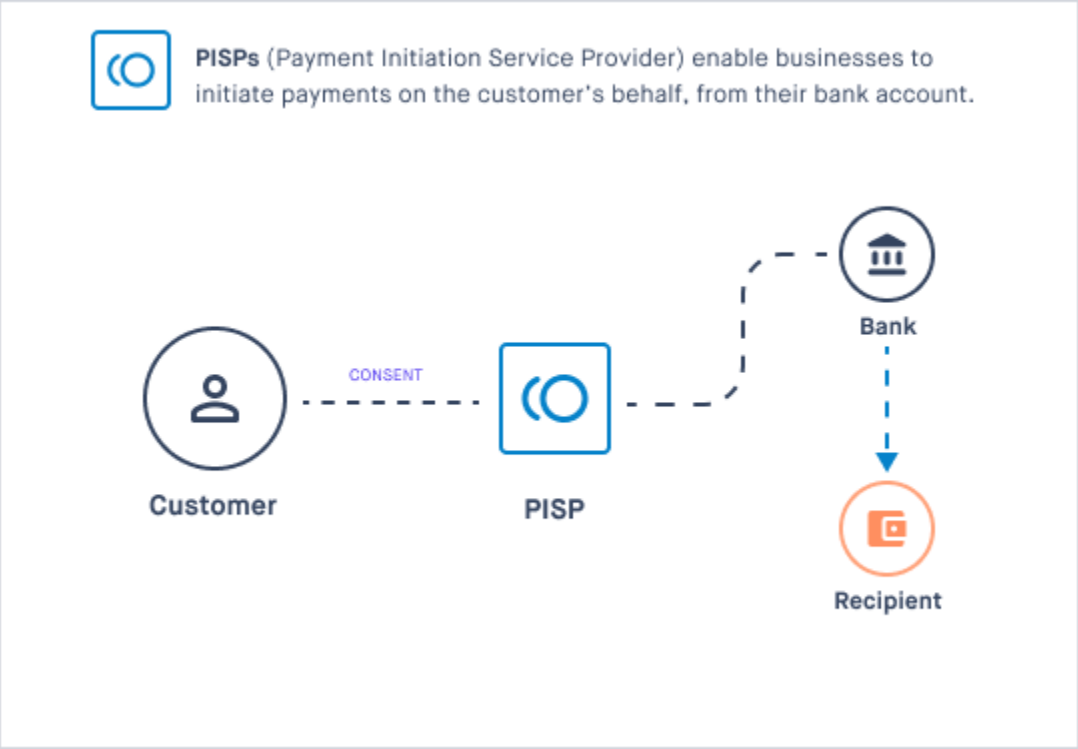
We are witnessing a new normal for banks. The COVID-19 crisis has underscored the importance of digital acceleration as banks look to serve their customers in new ways during lockdowns and quarantines. Customers are increasingly looking to access financial products and services on their own terms and on their own devices. They are looking for banks to solve their pain points in areas such as bank to bank transfers and account opening. This is the premise of open banking: secure consent-based sharing of customer banking data through third-party providers and non-bank products. Using application programming interface (API) technology, banks can unlock new use cases for payment initiation, customer account information, and more. Open finance is an extension of open banking permissioned data-sharing to include a wider range of financial products and services such as lending, remittance, investment, insurance, and more.

Figure 1a AISPs are often associated with lending, insurance, and personal finance managers.



Source: Author's own

Figure 1b PISPs are often associated with real-time payments, and personal finance managers.



Source: Author's own

Table 1 Key Concepts and Definitions

Terms	Definition
API	Application programming interfaces (APIs) allow third parties to access information efficiently, which promotes the development of new apps / services.
Open APIs	An Open API or Public API is a free to use, publicly available application programming interface (API) that provides developers with programmatic access to a proprietary software application
Open Banking	Open banking is defined as the sharing and leveraging of customer-permissioned data by banks with third party developers and firms to build applications and services, including those that provide real-time payments, greater financial transparency options for account holders, marketing and cross-selling opportunities.
Open Finance	Open finance is an extension of open banking permissioned data sharing and third-party access to a wider range of financial sectors and products including savings, mortgages, pensions, investments, and insurance
Embedded Finance	Embedded finance, enabled by open finance technologies, allows non-financial services companies to integrate financial services or product into their customer value proposition

What is driving open finance?

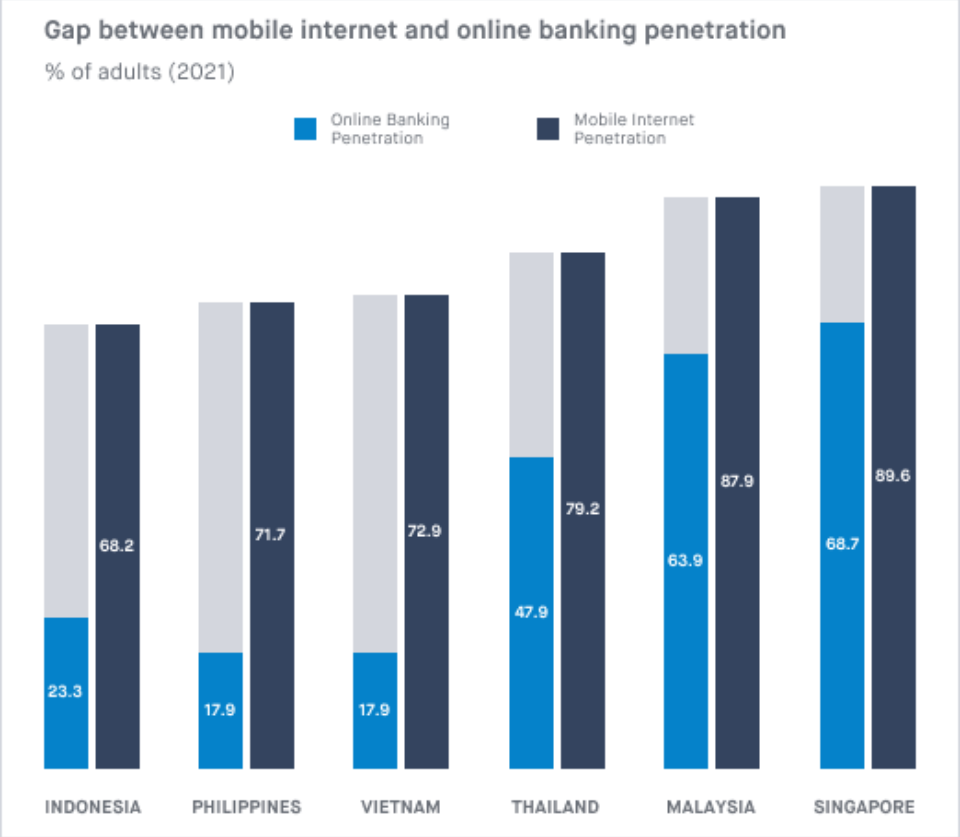
Digitization is blurring the boundaries of finance and disrupting the core business model of banks. Digital technology has already emerged as a game-changing enabler across multiple industries. Estimates by Bain projected that the Southeast Asia internet economy would have exceeded USD 100B in gross merchandise value (GMV) in 2020[1]. These tectonic shifts reflect the following fundamental changes that are disrupting the state of banking today.

Digitization shaping consumer expectations

The pandemic has accelerated prevailing trends in digital adoption. As distribution patterns shift from physical to digital, banks need to meet customers where they are today. Mobile internet penetration far outpaces online banking penetration across Southeast Asia (Figure 2). As more consumers adopt digital habits in favor of physical bank branch visits, banks no longer have access to customers via traditional brick and mortar channels. Instead, banks need to adapt by reducing their physical branch presence and find new ways to service their customers online. Roland Berger[2] predicts up to 10,000 branch closures in Southeast Asia before 2030: 18% of today's physical banking presence. Challenger banks such as BTPN Jenius in Indonesia are new entrants that recognize the need for mobile-first banking experiences.

[1] E-conomy SEA 2020 Bain & Company
[2] 11,000 bank branches in Southeast Asia to shut over next decade. (2021, May 31). https://www.consultancy.asia/news/4193/11000-bank-branches-in-southeast-asia-to-shut-over-next-decade

Figure 2 Online banking lagging behind mobile internet adoption in SE Asia

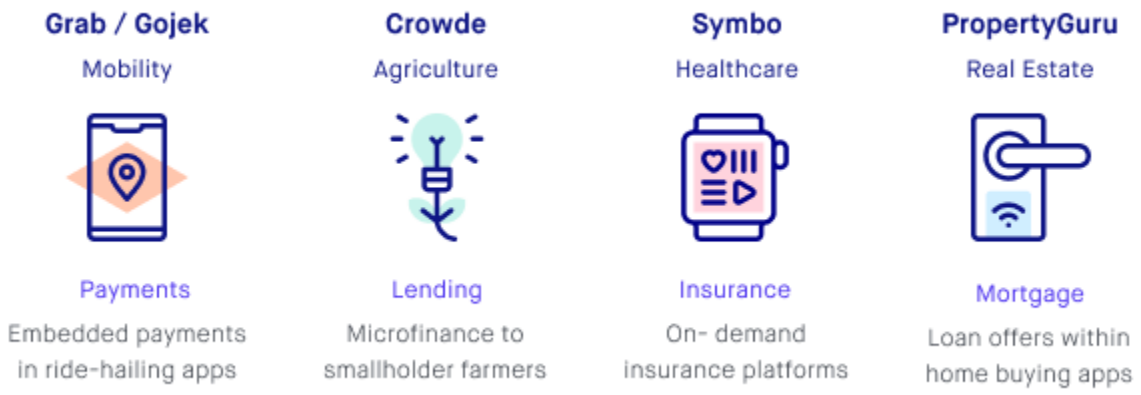


Source: adapted from Statista

Competitive unbundling of finance

Banking products and services are easily unbundled as technology makes it easier to enable financial services outside of/on top of traditional banking processes. This leads to the rise of a new phenomenon known as “embedded finance” – which refers to how non-financial companies (like mobility, agriculture, healthcare, real estate etc.) are launching embedded financial services, using open finance technology products, to better serve their customers (Figure 3). Companies using embedded finance have a competitive edge as they are often closer to the customer, focused on solving a particular product pain point. Finance solutions are then offered at the point of need and integrated with the product, without requiring a separate application and origination process. Having access to verified user data also allows embedded finance providers to offer new tailored financial products like insurance / lending using personalized underwriting.

Figure 3 Embedded finance opportunities across industry verticals

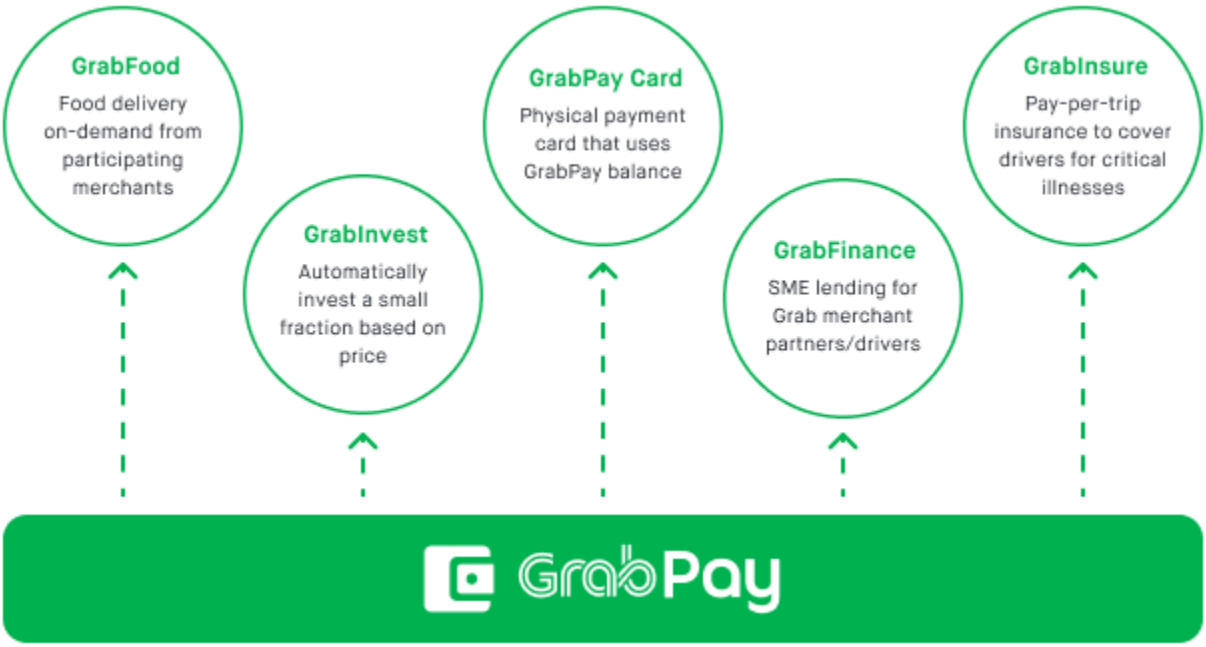


Source: Author's own

Sticky platforms reducing friction

The current financial landscape is transforming with the introduction of non-bank financial service providers willing to tackle consumer segments that banks have previously ignored. Platforms such as Alibaba, Grab, and Google are increasingly offering value-added financial services within their ecosystem. Big-Tech companies have a competitive advantage in their ability to scale from network effects, access to large data sets and experience with technology. In Southeast Asia, we see the transformation of ride hailing apps such as Grab/ GoTo (previously GoJek) into "superapps" that cover multiple touch points of daily living including food delivery and digital payments. In removing friction in their customer journey, embedded finance offerings within digital platforms create user stickiness and customer retention by curating a simple, holistic, convenient experience for the customer.

Figure 4 Grab embedded finance ecosystem



Source: Author's own

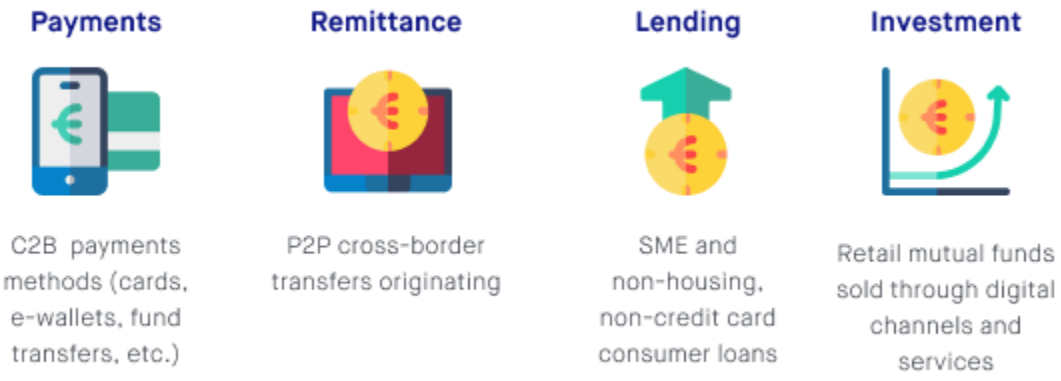
Why does open finance matter for banks?

Open finance offers new growth and distribution opportunities for banks. With open finance, banks can tap into the massive digital finance opportunity, and find new ways to create value while staying relevant amidst the disruption brought about by new entrants. Banks are well-placed in their competitive advantage of having access to banking licenses, massive data, customer trust, expertise in core financial infrastructure. They can leverage their competitive advantage and partner with third-party providers to develop new products and services for their customers in real time at point of sale. However, banks need to ensure that key questions around commercial viability, aligning operational models for digital change and managing regulatory risks are addressed as they explore this new normal.

What are the digital finance opportunities enabled by open finance?

Open finance enables banks to tap into the massive digital finance opportunities in Southeast Asia. Current regulatory frameworks already allow banks to pivot to open finance. Open finance enables banks to tap into market opportunities within the digital finance space and expand opportunities to those previously excluded from formal financial systems. For this study, we looked at four key digital finance opportunities for open finance (Figure 5): payments, remittance, lending and investment. Digital payments have the largest gross transaction volume, estimated to exceed USD 1.2 trillion in 2025, while digital lending and investment have the highest growth rates with a CAGR of 32% (Figure 6).

Figure 5 Digital finance opportunities for open finance



Source: Author's own

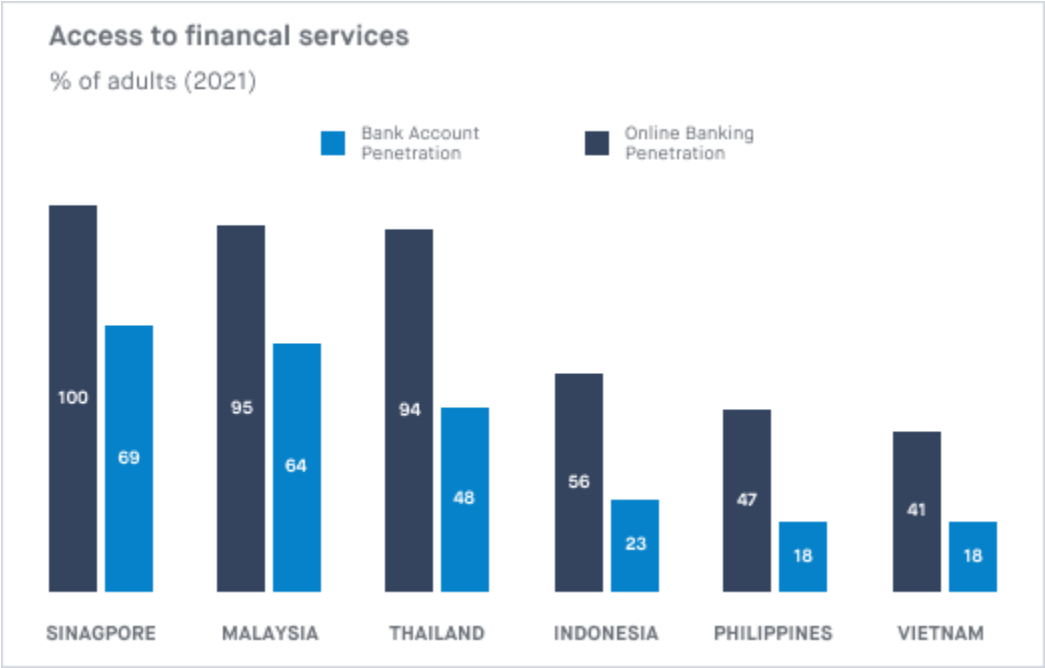
Figure 6 Massive opportunities in digital financial services in Southeast Asia

Source: adapted from Bain, Google and Temasek[3]

Southeast Asia is a promising region with a huge unmet demand for financial services and appetite for the digital economy. Southeast Asia is among the world's fastest growing online markets: a booming population of 655 million[4], and 60 million new consumers in the last two years[5]. At the same time, the region faces significant financial inclusion challenges. More than 70% of adults in Southeast Asia are either "underbanked" – no access to competitive credit or savings products, or "unbanked" – without a basic bank account[6]. Access to financial services is uneven across regions (Figure 7) with Singapore, Malaysia, and Thailand close to 100% banked, while only close to half in Indonesia, the Philippines, and Vietnam banked. Banks and financial service providers play a critical role in addressing these gaps. By partnering with third-party providers who are closer to the end users (e.g. superapps, employers, retail networks), banks can offer new micro credit, saving or insurance products at point of sale to a wider customer base.

[3] E-Conomy SEA 2020, Bain & Company, Google and Temasek (2020)
[4] United Nations Department of Economic and Social Affairs, Population Division. (2019)
[5] Digital Consumers of Tomorrow, Here Today; Facebook and Bain & Company, (2020)
[6] Fulfilling its Promise: The future of Southeast Asia's digital financial services, Google, Temasek and Bain & company, (2019)

Figure 7 Access to financial services uneven across the region



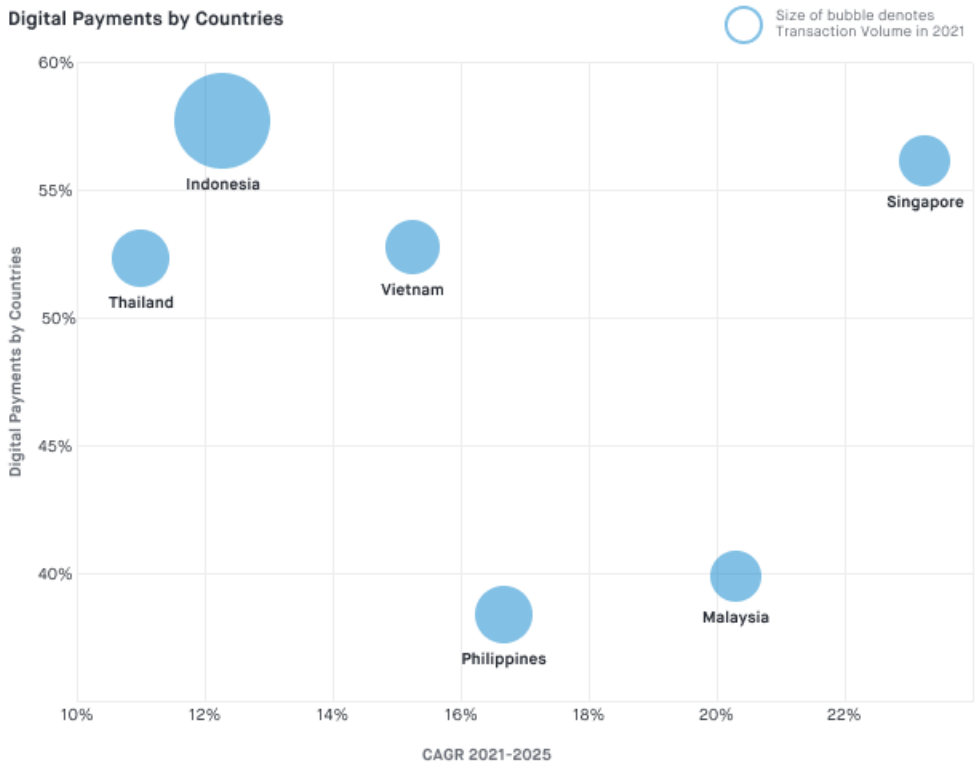
Source: adapted from Statista

Digital payments offer a critical on-ramp to financial inclusion. The Bank for International Settlements (BIS) advocates for widespread adoption of transaction accounts[7] as a gateway to access other financial services such as credit, savings, and insurance. Given the utility of payments in daily usage, access to transaction accounts such as e-wallets can allow those previously excluded means to transfer funds and store value, while gaining visibility to access other financial services.

The COVID-19 pandemic has been a tipping point accelerating the shift towards digital payments. Transaction volume in digital payments is expected to reach USD 1.2 trillion by 2025 (Figure 6). Southeast Asia has both mature markets with high rates of penetration (>50%) such as Indonesia, and nascent markets with high rates of growth and low rates of market penetration such as Malaysia (Figure 8). In Indonesia where total volume of cashless payments amounted to USD 11B in 2018, electronic intra/inter-bank fund transfers represented 65% of cashless payments, followed by e-money payments at 27% (Figure 9).

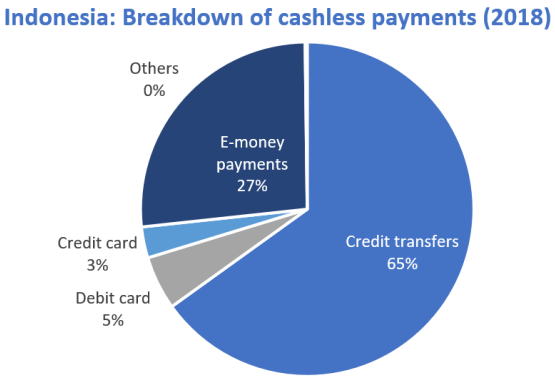
[7] Payment aspects of financial inclusion in the fintech era. Bank of International Settlements and World Bank Group (2020)

Figure 8 Southeast Asia has both mature and nascent markets for digital payments



Source: adapted from Statista

Figure 9 Credit transfers the most common method of cashless payments in Indonesia

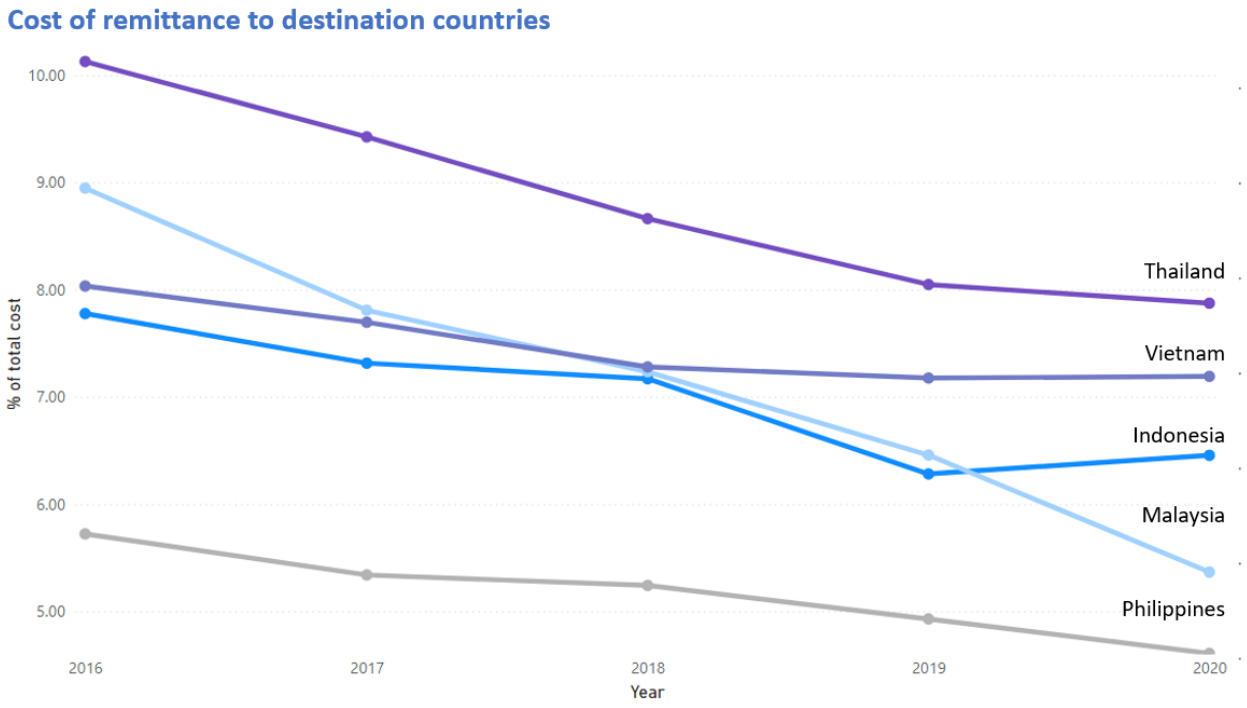


Source: BIS

Digital remittance presents a cost-effective way for cross border payment. Transaction volume in digital remittance is expected to reach USD 35B by 2025 in Southeast Asia (Figure 6). Remittance flows play a critical lifeline especially for developing Asian economies. Migrant labor from Asia represents 20.4% of the world[8], which reflects the underlying demand for cross-border remittance flows.

Traditional providers of cross-borders remittance services include post offices, banks, and specialized money transfer services such as Western Union. However, these methods are often costly due to inefficient processes, legacy infrastructure and multiple financial intermediaries involved in the value chain. Innovation in digital infrastructure has allowed new digital entrants like TransferWise, Remitly to offer services at reduced fees, and have brought the cost of remittance services down. In Southeast Asia, cost of remittance can be as low as 4.6% of remittance amount in the Philippines in 2020 (from 5.7% in 2016), to 7.8% in Thailand in 2020 (from 10.1% in 2016) (Figure 10).

Figure 10 Cost of remittance decreasing from 2016 to 2020



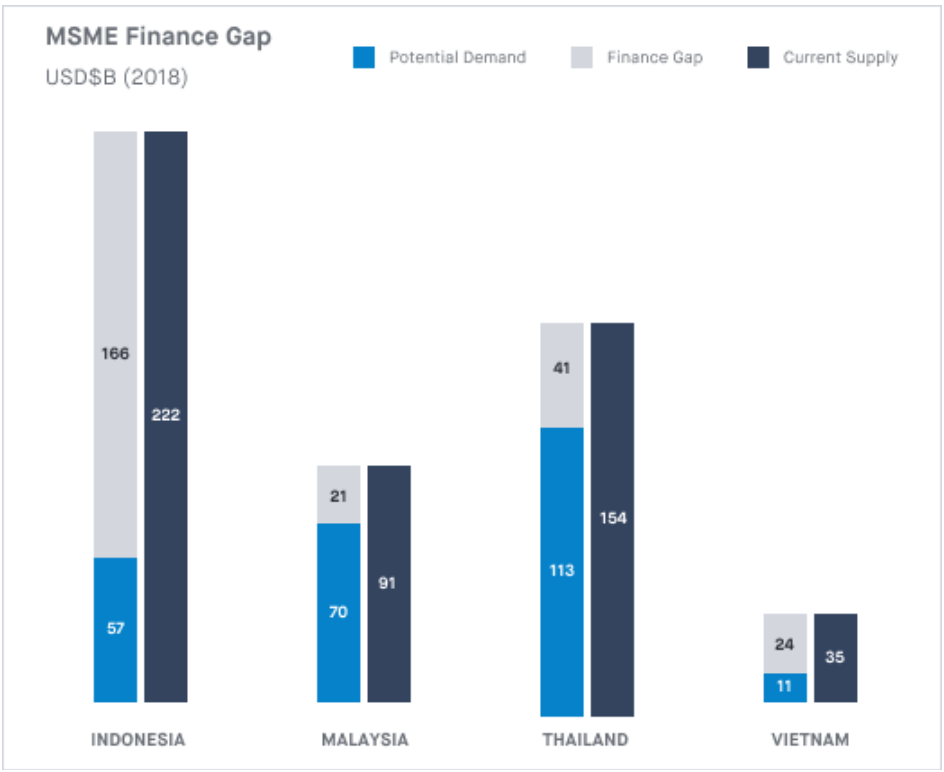
Source: World Bank

[8]Labour migration in Asia and the Pacific (ILO in Asia and the Pacific). Retrieved July 7, 2021, from https://www.ilo.org/asia/areas/labour-migration/lang--en/index.htm

Digital lending can help address the large financing gap faced by SMEs in Southeast Asia. Micro, Small and Medium Enterprises (MSMEs) are critical economic engines of growth – they account for between 52% and 97% of total employment among ASEAN member states and contribute between 30% and 53% to GDP in 2018[9].

However, financing for MSMEs remains limited. According to the SME Finance Forum, the funding gap amounts to almost USD 300B in Southeast Asia in 2018 – with regions like Indonesia reflecting a large unmet gap of up to 74% of potential demand (Figure 11). MSMEs are often excluded from the formal lending system due to information asymmetry informing their lack of credit worthiness, and their lack of collateral. Digital technologies and alternative data can help address the information gap in evaluating credit risks.

Figure 11 MSMEs face large funding gap



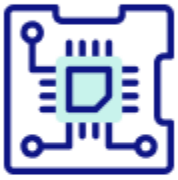
Source: adapted from SME Finance Forum

[9] SMEs as the Backbone of Southeast Asia's Growing Economy. (2019, April 29). IFAC. https://www.ifac.org/knowledge-gateway/contributing-global-economy/discussion/smes-backbone-southeast-asia-s-growing-economy

How open finance can create value for banks?

Expand access to underserved customers

- Lower the cost of customer acquisition and onboarding through digital enabled onboarding methods in partnerships with third-party vendors
- Reduce time and cost required to conduct KYC for prospective customer
- Use cases: Authentication, Account Opening



Provide new product offerings

- Enables banks to leverage Banking-as-a-Service to offer a wider range of digital financial products and services
- Partner with third-parties to build new financial service solutions and unlock new revenue streams
- Use cases: Payments, SME Financing

Deliver quality customer experience

- Enhance customer experiences by offering personalized banking that puts customers in control of their financial data
- Position banks to serve as trusted financial advisor through data-driven customer engagement
- Use cases: Statement Aggregation, Personal Finance Management

Expand access to underserved customers

Open finance enables banks to expand access to underserved customers by lowering the cost of customer acquisition and onboarding. Customer due diligence is an important process as part of onboarding new customers. Banks must comply with Anti-Money Laundering and Counter Financing of Terrorism (AML/CFT) regulations and maintain a stringent Know Your Customer (KYC) process. However, it is often costly to service customers in developing economies due to limited data for verification, high operational costs due to manual processes, and prohibitive cost barriers in rural areas with weak infrastructure.

In Indonesia for example, the cost of onboarding by traditional agent-assisted model can be as high as USD 14.80, almost 15x higher than a digitally assisted third party model (Figure 12). The high cost of onboarding can be attributed to the high cost of agent acquisition, particularly in rural areas with limited physical branches. The cost also factors in the investment in agent training and managing tedious paperwork. By contrast, digital enabled onboarding in partnership with third party vendors can significantly reduce the time and cost required to conduct KYC for prospective customers. In addition, applying a tiered risk-based approach to KYC where low-risk customers (i.e. customers with low value accounts) have reduced KYC stringency can help banks manage customer onboarding in a more cost-effective and streamlined manner.

Figure 12 Comparison of banks and third-party onboarding costs in Indonesia

Source: adapted from Microsave Consulting[10]

[10] KYC practices in Indonesia and the opportunity for implementing e-kyc to accelerate financial inclusion, Microsave Consulting (2020)

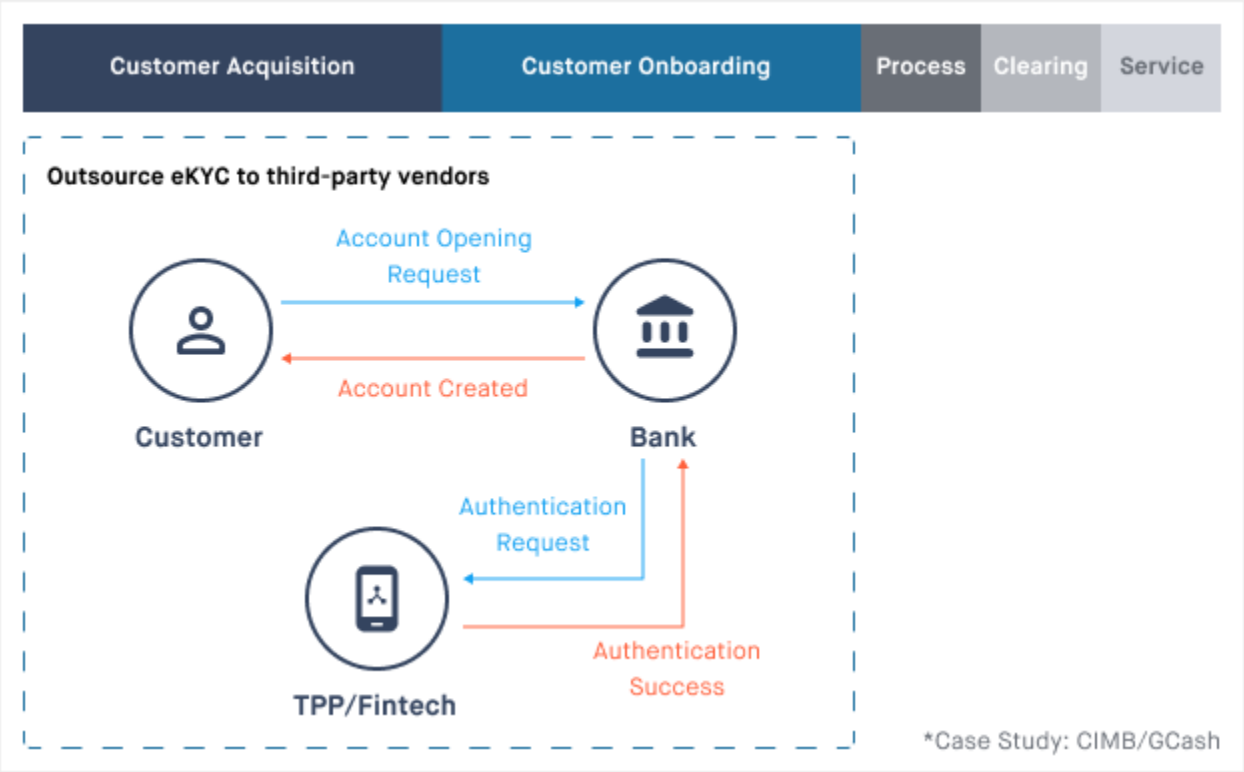
How does open finance technology help? Open finance can enable banks to find new ways to

- Partner with third parties for e-KYC
- Scale by accessing shared KYC utility

These approaches are illustrated in Figure 13a and 13b.

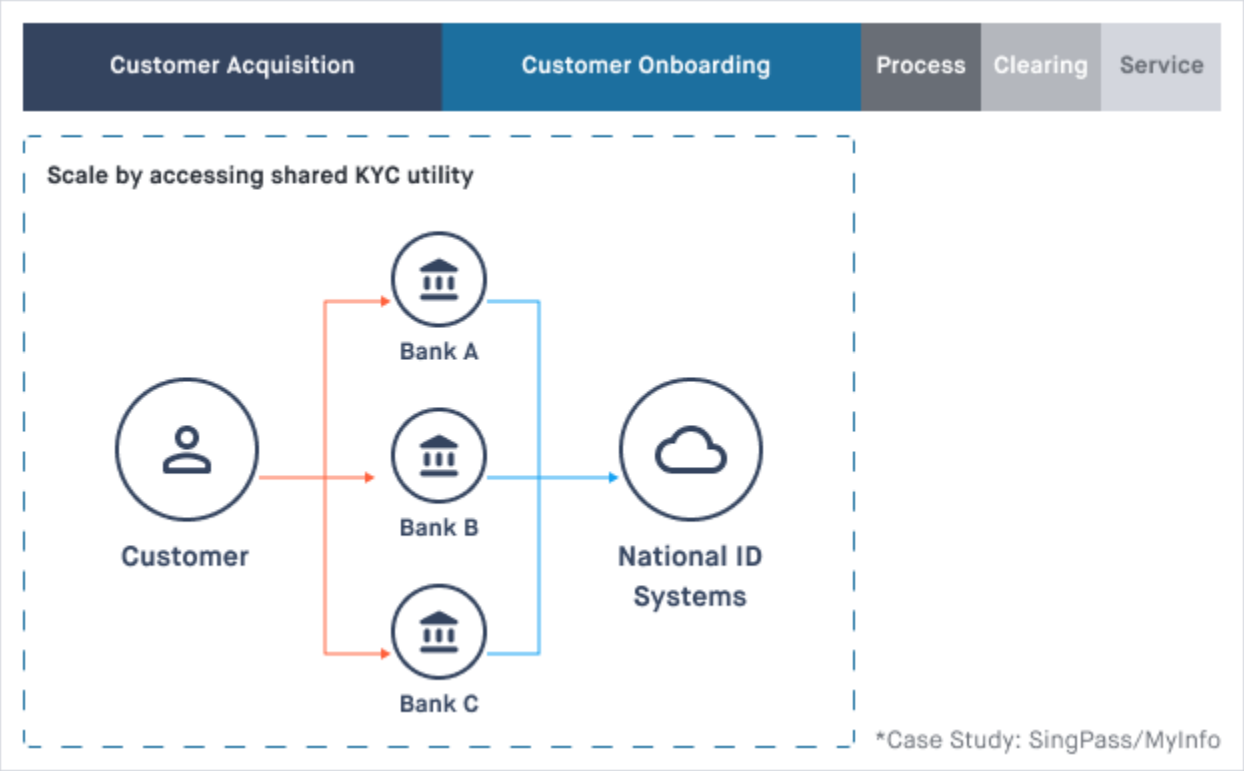
Mapping open finance enhancements to financial value chain (Access)

Figure 13a Open finance enhancements



Source: Author's own

Figure 13b Open finance enhancements



Source: Author's own

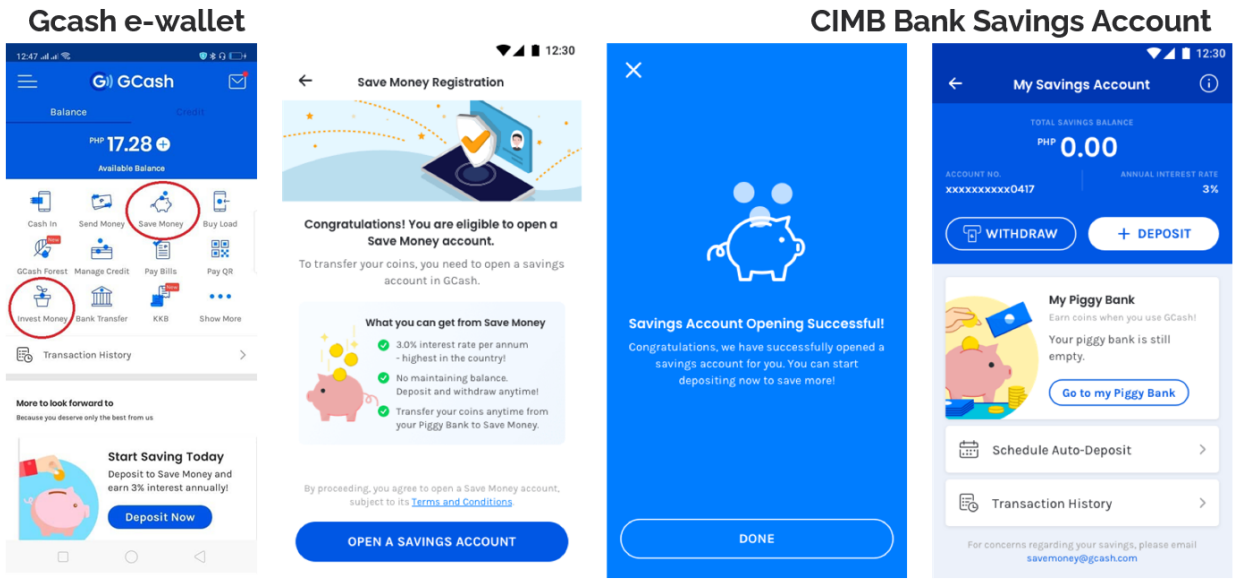
Partner with third parties for e-KYC: Alternative verifications enabled through digital channels such as using biometrics, facial recognition, electronic documents, and signatures can help lower the cost of KYC and reduce reliance on physical agents and/or bank branches. Banks can partner with fintech partners such as mobile wallet providers to onboard new high-volume, low-value customers. Since the initial KYC is already conducted by fintech partners, banks do not have to duplicate effort and can take advantage of a streamlined, low cost onboarding process.

CASE STUDY: CIMB Bank partnership with GCash for account opening

In 2019, CIMB Group acquired a commercial banking license to launch a digital-only CIMB Bank in the Philippines. Through a partnership with GCash, a leading e-wallet player, CIMB Bank offers existing GCash users the ability to seamlessly open saving accounts within the GCash platform. As these are existing users which GCash had performed customer diligence and KYC with, CIMB Bank can leverage the customer data from GCash for the onboarding process without needing to duplicate efforts. Within a span of 6 months, CIMB Bank was able to onboard more than 500,000 new accounts as of August 2019.

Source: The Asian Banker[11]

Figure 15 CIMB Account Opening via GCash



Source: GCash

[11] Kapfer, Chris. EKYC in emerging markets opens new avenues for growth. Retrieved July 7, 2021, from https://www.theasianbanker.com/updates-and-articles/ekyc-in-emerging-markets-opens-new-avenues-for-growth

Scale by accessing shared KYC utility: Having a centralized identity database that is accessed by multiple financial service providers can reduce duplicate efforts in onboarding new customers. This can take the form of a shared KYC platform enabled by data sharing APIs between financial institutions. These shared KYC platforms can be led by the public sector, enabled by digital identity programs, or through the private sector, enabled by decentralized technologies. There has been a greater adoption of centralized national ID systems across Southeast Asia in recent years– such as SingPass in Singapore, PhilSys in Philippines, e-KTP in Indonesia.

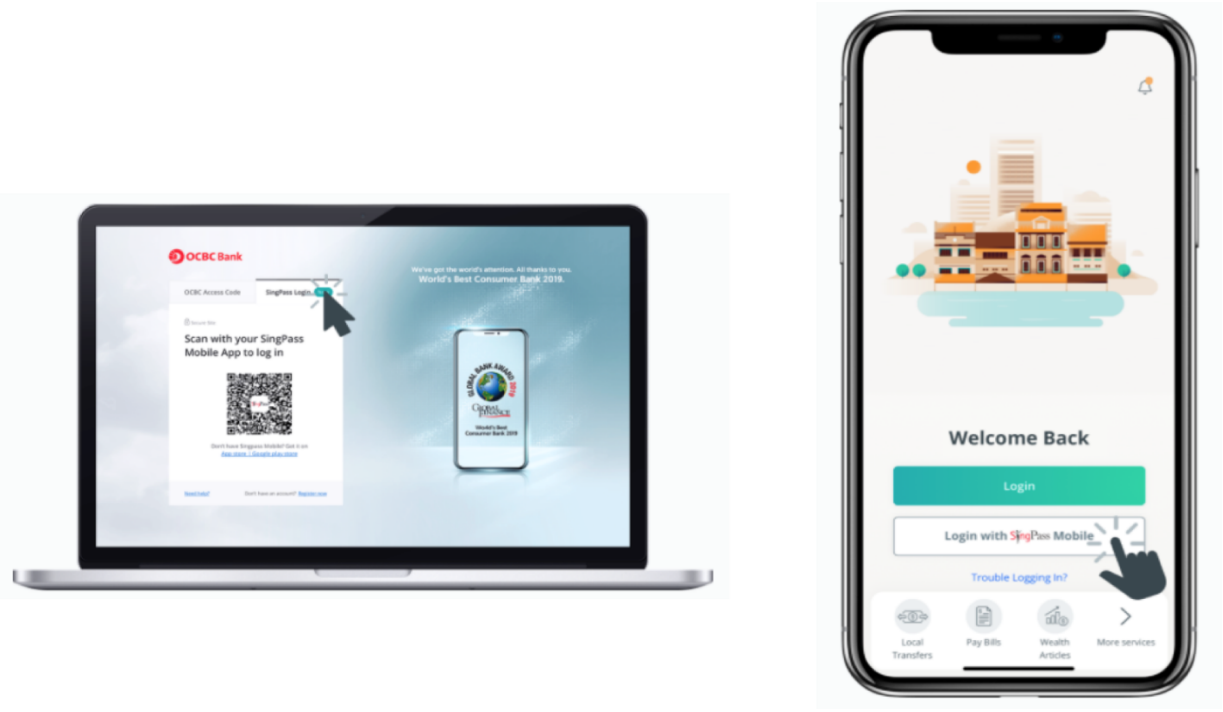
CASE STUDY: SingPass/ MyInfo

As part of the government's National Digital Identity (NDI) initiative, the Singapore Personal Access (SingPass) is Singapore residents' digital identity, which enables secure and convenient transactions in the digital and physical realms. MyInfo is a digital personal data platform that contains more than 100 government-verified personal data items.

To date, more than 60 financial institutions in Singapore leverage MyInfo for over 220 digital services to onboard and perform customer due diligence.

Source: Financial Action Task Force [12]

Figure 16 Third party authentication enabled by SingPass



Source: OCBC Bank

[12] FATF (2020), "Appendix B" in Guidance on Digital Identity, FATF, Paris, www.fatf-gafi.org/publications/documents/digital-identity-guidance.html.

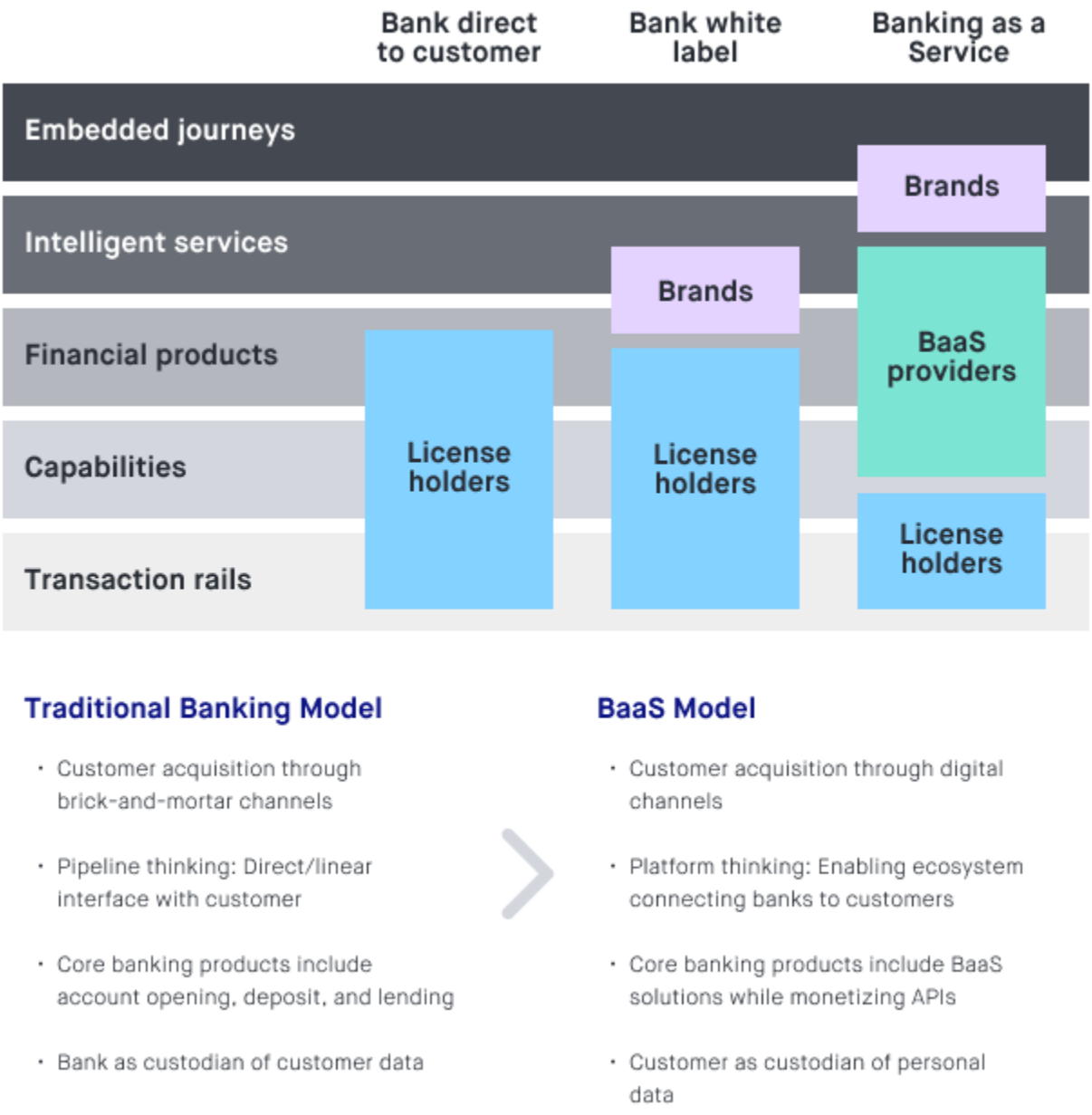
Provide new product offerings

Open finance allows banks to provide new product offerings and tap into new revenue streams. While traditional banking is being disrupted with new entrants and new technologies, open finance enables banks to leverage Banking-as-a-service (BaaS) to offer a wider range of digital financial products and services to meet the evolving needs of customers across different segments.

Adopting BaaS allows banks to unbundle their banking stack while partnering with different third-parties to build new financial service solutions (Figure 17). Banks are well placed to leverage their competitive advantage in having access to banking licenses, expertise in core financial infrastructure to partner with third-party providers to develop specialized products. Banks do not need to think of themselves as closed-loop, vertically integrated pipelines that offer traditional banking products directly to customers, but instead can leverage new partnerships and the broader ecosystem to open up banking products to partners who can then take these products to the customers.

In doing so, banks can unlock new revenue streams. Instead of depending on core banking services where the margins on interest fees are being eroded due to competition and innovation, banks can explore new models of revenue generation such as renting their license, or fee-sharing arrangements such as charging a percentage of transactional value, and API monetization where they can charge a fee for API usage.

Figure 17 Shift from traditional banking to banking-as-a-service model



Source: adapted from 11:FS

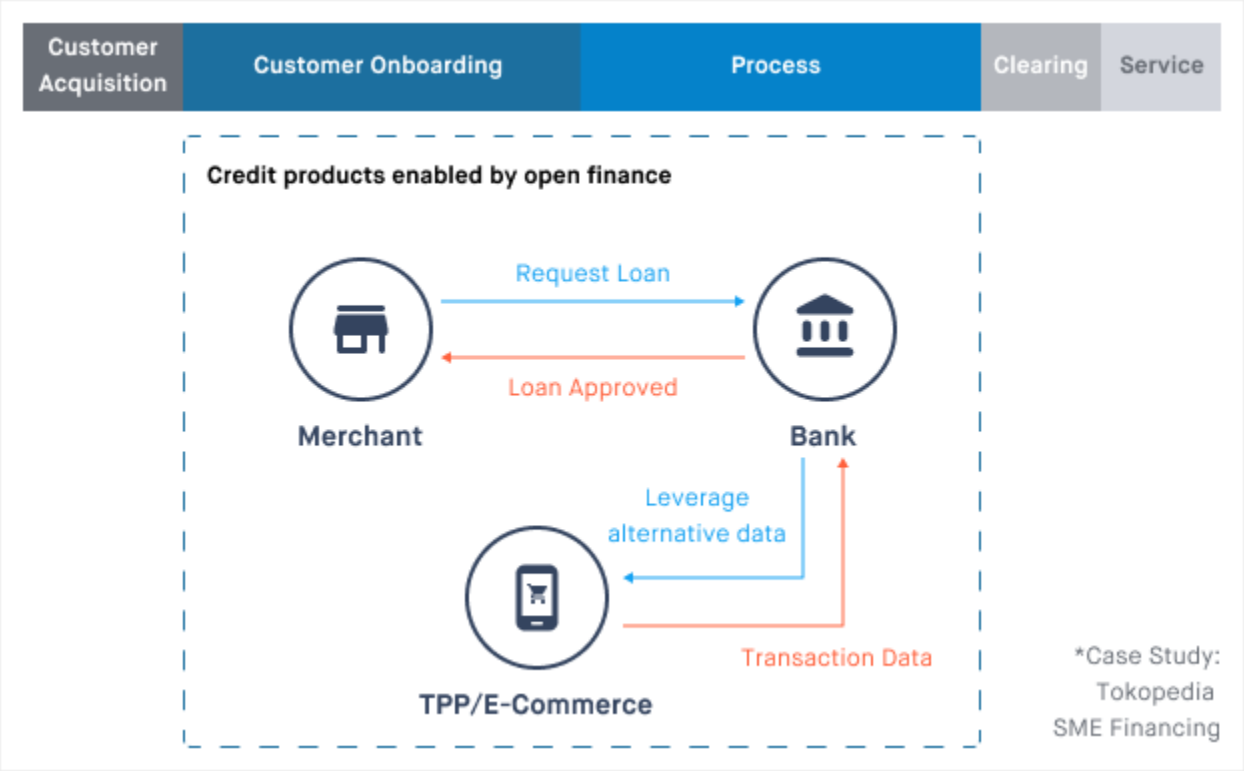
What are examples of open-banking enabled product offerings for banks? While not exhaustive, open finance can enable new product offerings such as:

- Digital payments, fund transfer, money movement services
- Innovative credit solutions for new customer segments

These use cases are illustrated in Figure 18a and 18b.

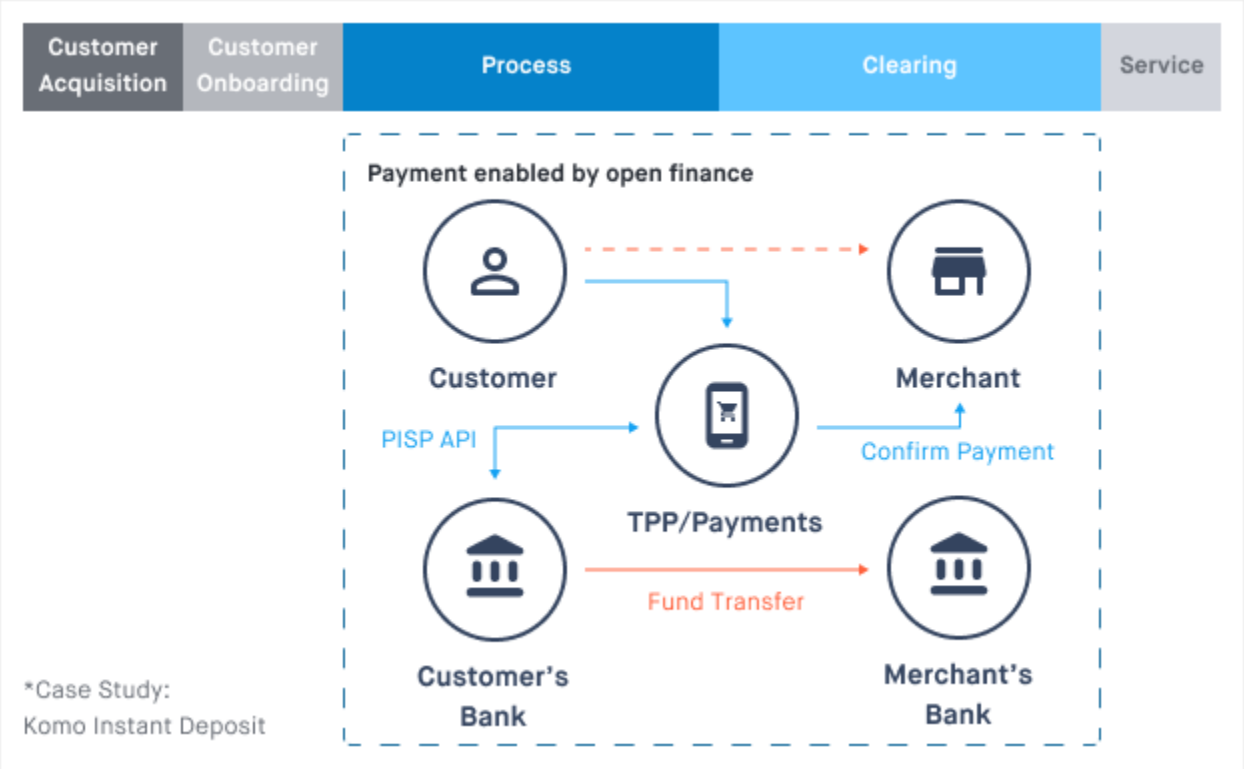
Mapping open finance enhancements to financial value chain (Product)

Figure 18a Open finance enhancements



Source: Author's own

Figure 18b Open finance enhancements



Source: Author's own

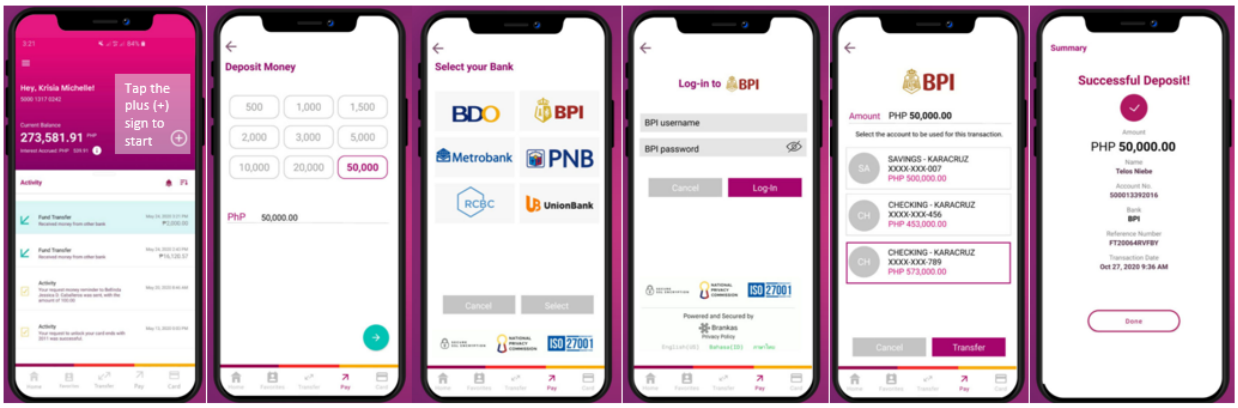
Payment enabled by open finance: As the transition away from cash-based transactions towards digital payments accelerates, banks can leverage open finance to facilitate digital payments. Payment initiation APIs can allow authorized third-party Payment Initiation Service Providers (PISP) such as e-wallets, e-commerce sites, remittance companies etc. to initiate transactions on the customer's behalf from an account the customer holds with another institution. This enables new forms of payment flows between individuals, business, and governments (P2P, P2B, B2B, G2P), thus eliminating the need of a payment intermediary. Pairing open finance with the development of payment systems infrastructure can further transform the speed, agility and interoperability of the financial system.

CASE STUDY: Komo (by East West Banking Corporation) instant cash-in

Komo is a digital banking service by East West Bank launched in May 2020 during the height of the COVID-19 pandemic. As a fully digital service, Komo allows users to open an account, add funds, transfer funds and other bank transactions all through the mobile app. Through payment initiation APIs secured by Brankas, an open finance API integrator, Komo can enable instant in-app deposits. Users can instantly top-up their balance directly from the app by transferring funds from their source bank accounts in other banks.

Source: Komo[13]

Figure 19 Komo Instant Deposit Feature



Source: Komo

Lending products enabled by open finance: Open finance allows banks and lenders to utilize alternative data analytics to enhance the credit underwriting process. As mentioned in *page 9*, the financing gap for SMEs is large, and can be attributed to the lack of formal data or insufficient credit histories among smaller firms. Through data sharing enabled via APIs, banks can partner with third-party providers such as online marketplaces to gather alternative data including ecommerce transaction data to assess the credit risk of previously underserved customers.

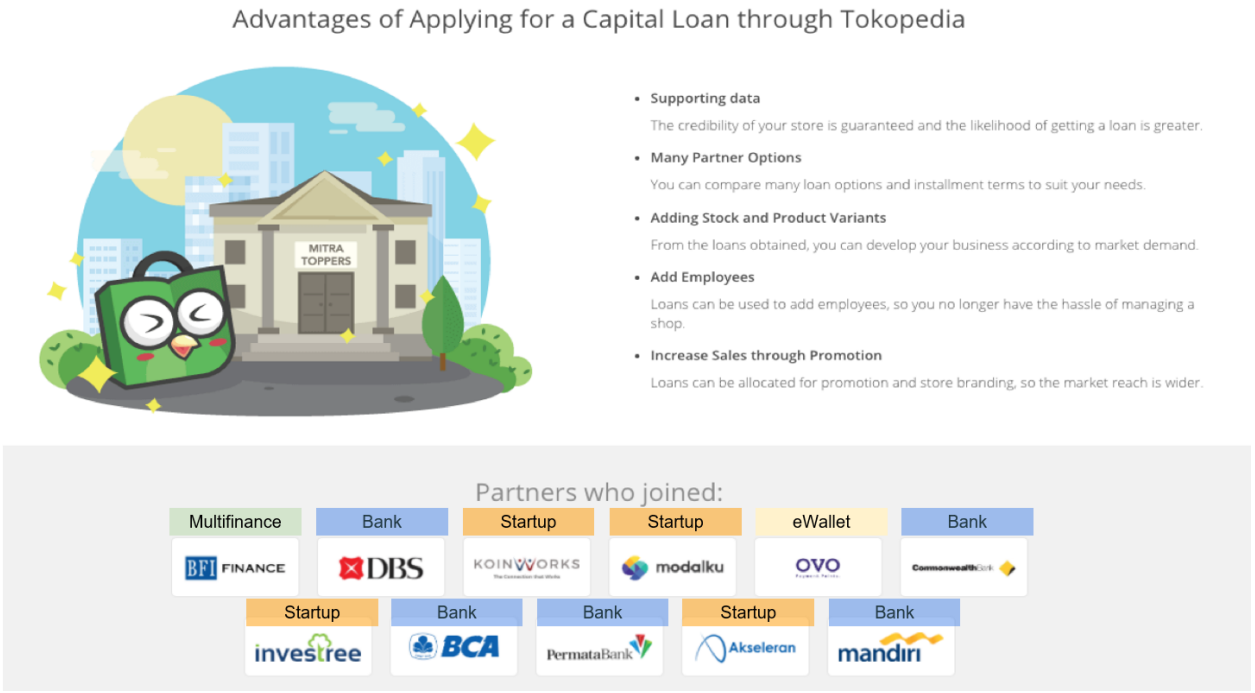
[13] Komo and Brankas launch Open Banking in the Philippines—PR Newswire APAC. Retrieved July 7, 2021, from https://en.prnasia.com/story/320057-0.shtml

CASE STUDY: Tokopedia merchant supply chain financing

Tokopedia, the Indonesia e-commerce giant, launched a merchant financing program called Mitra Toppers in 2016 to help merchants access loan facilities from banks and other lending partners. Many Tokopedia merchants are first time entrepreneurs running micro, small and medium size businesses and often lack sufficient credit histories. Tokopedia can provide robust data around the merchants such as their e-commerce transaction data, monthly revenue to score the credit worthiness of merchants.

Source: Tokopedia[14]

Figure 22 Tokopedia merchant lending program



Source: Adapted from Tokopedia

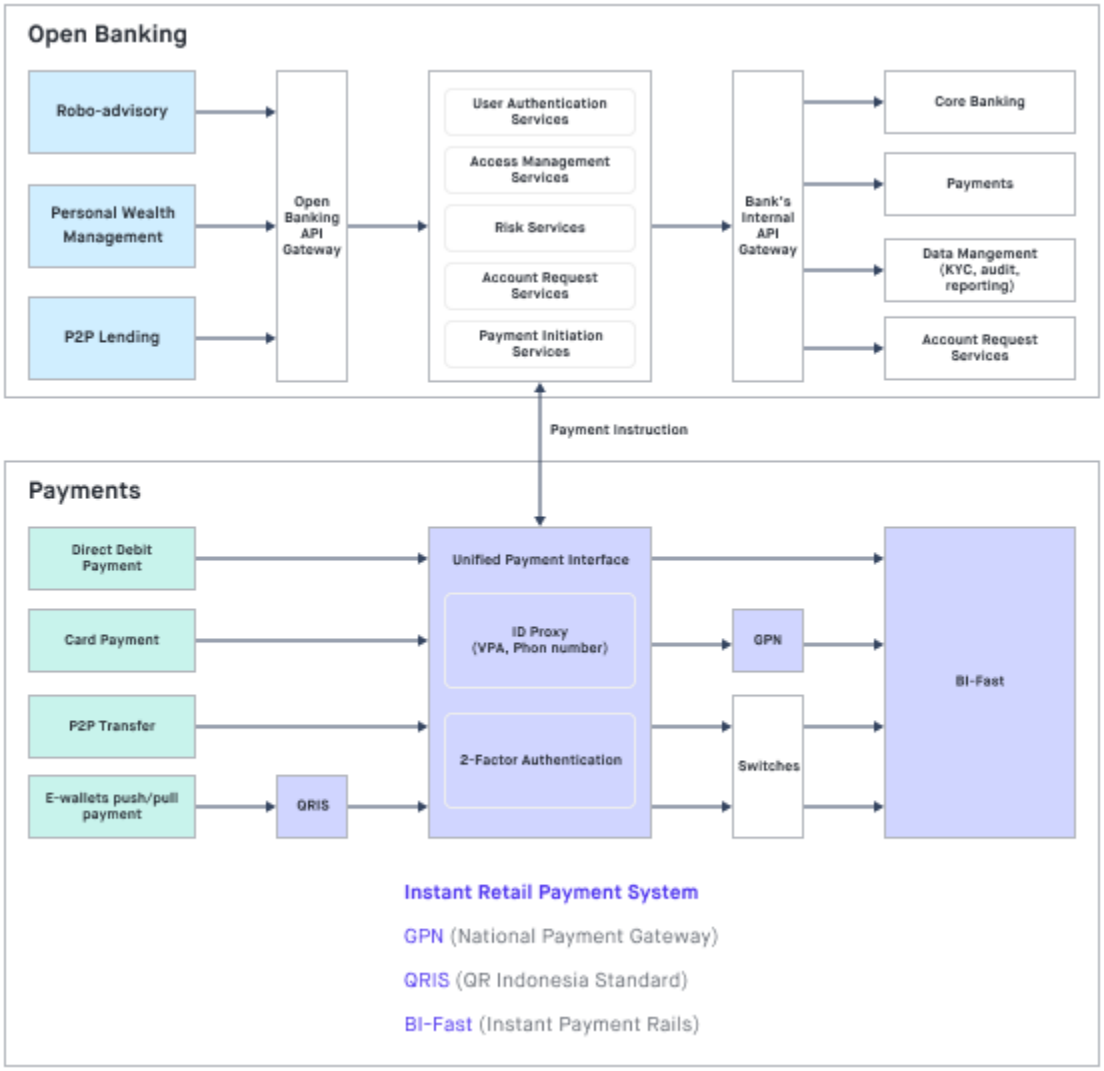
[14] Mitra Tokopedia untuk Penyedia Pinjaman Online. Tokopedia Care. Retrieved July 7, 2021, from https://www.tokopedia.com/help/article/siapa-saja-yang-menjadi-mitra-tokopedia-untuk-pinjaman-online

Box 1: Payment landscape in select ASEAN countries and impact on Open Finance

Indonesia

Bank Indonesia (BI) is working towards a 2025 Payment System Blueprint that seeks to transform Indonesia's payment system for the digital age. The Instant Retail Payment System will include infrastructure such as: standardized QR codes for payments, BI-FAST (Instant Payment Rails for real time bank to bank settlement), a National Payment Gateway allowing for payment interoperability and a Unified Payment Interface as the interface for banks to connect to.

Figure 20 Indonesia Open Banking and Payment Infrastructure



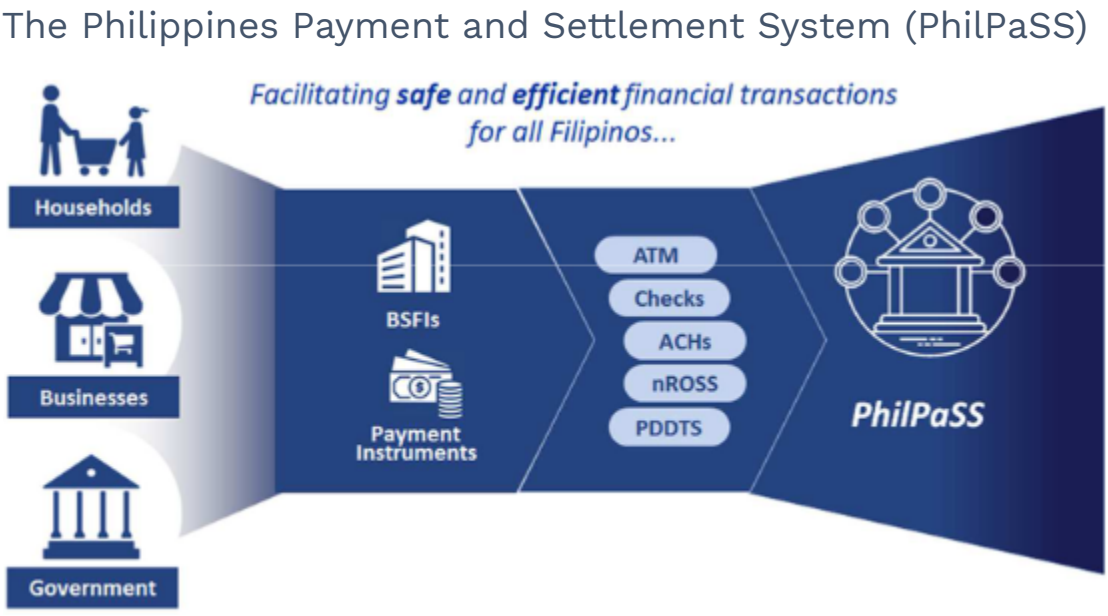
Source: Adapted from Saison Capital[15]

[15] Indonesia's Payment System Roadmap 2025 | by Reinaldo Gani | Saison Capital | Medium. Retrieved July 7, 2021, from https://medium.com/saison-capital/indonesias-payment-system-roadmap-2025-dec3fdc520c3

Philippines

In the Philippines, efforts have also been made to modernize the payments systems. The Philippine Payment and Settlement System (PhilPaSS) was first established in 2002. More recently, the National Retail Payment System (NRPS) was launched in 2015 which allows interoperability among Payment Service Providers (PSPs) by creating multilateral arrangements via automated clearing houses (ACHs). Two ACHs have been established: 1) the Philippine Electronic Fund Transfer (ETF) System and Operations Network (PESONet) for batch credit payment, and 2) InstaPay for real-time low value credit push payments.

Figure 21 Philippine Payment Infrastructure



Source: BSP Digital Payments Transformation Roadmap 2020-2023

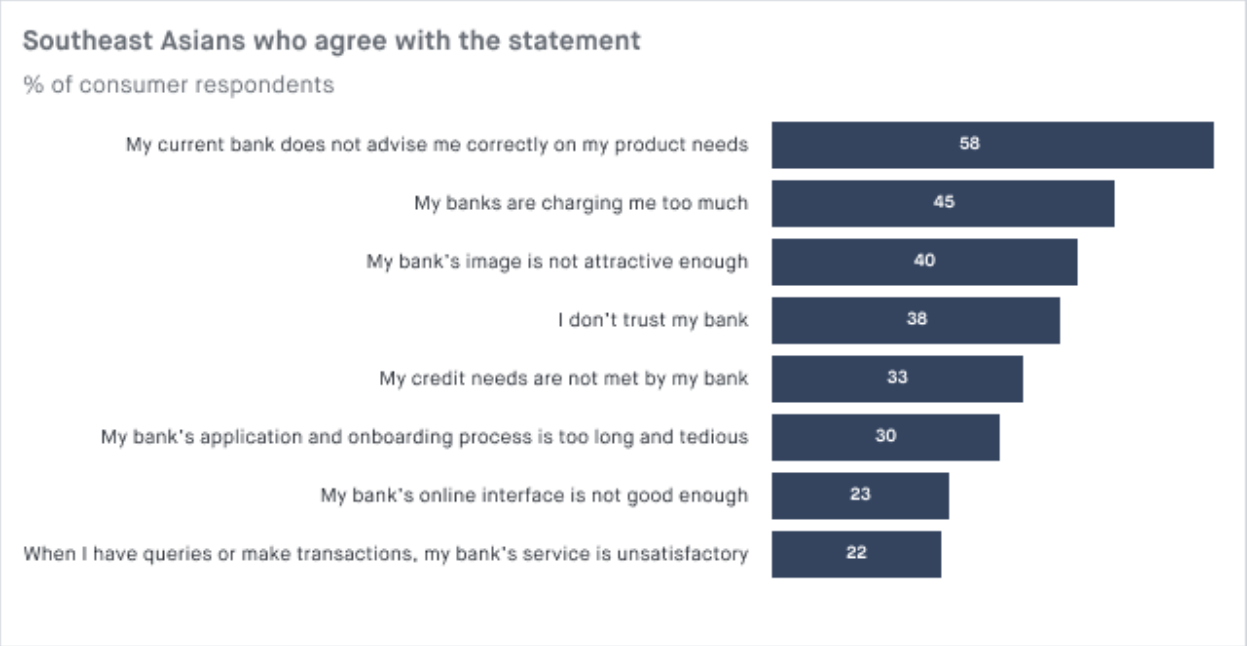
Implication for Open Finance

With the introduction of real time payment systems, banks can offer direct fund transfer capability without going through existing payment gateways. Consumers can fund their retail purchases directly from their own bank accounts to the merchants (Account to Account payments) using customer banking data enabled by open finance without relying on intermediaries. Through open APIs, banks who have a direct entry point into payment rails can expose this direct fund transfer capabilities to third parties and unlock new use cases around e-commerce payments, mobile wallets, corporate disbursement.

Deliver quality customer experience

Open finance can help banks deliver quality customer experience through data aggregation that puts customers in control of their financial data. With the ubiquity of digital customer centric experiences across multiple industries outside of the financial services (the likes of Grab, Shopee, Facebook), customers are looking for financial institutions to offer a relational and personalized banking experience. According to BCG 2019 Center for Customer Insight Survey, lack of personalized advice, unattractive image and poor online interface are among the top reasons why consumers in Southeast Asia are not satisfied with their current banks (Figure 23).

Figure 23 Top reasons why consumers are not satisfied with their current banks



Source: adapted from BCG 2020[16]

Delivering quality customer experience will go a long way to position banks as trusted financial advisors through data-driven customer engagement. A customer centric approach to financial health as advocated by the World Bank[17] can help underbanked/ underserved customers engage in improved day to day financial management, build up safety nets, respond to financial shocks and contribute to overall financial wellbeing.

[16] The Rise of Digital Banking in Southeast Asia, Boston Consulting Group (BCG) (2020)
[17] Moving from financial access to health. Retrieved July 7, 2021, from https://blogs.worldbank.org/allaboutfinance/moving-financial-access-health

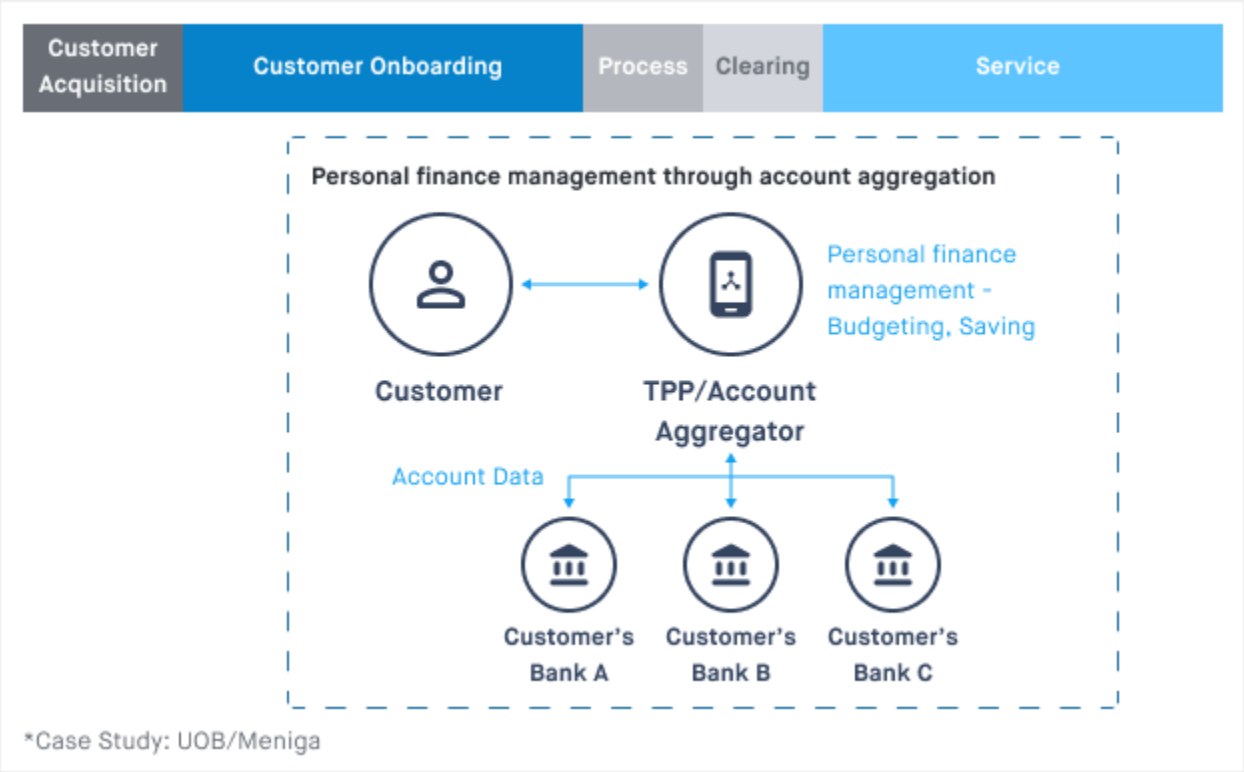
How can open finance help banks enhance customer experience? Through account aggregation and data sharing, open finance can deliver new customer services around

- Personal finance management services
- Financial wellbeing solutions

These use cases are illustrated in Figure 24.

Mapping open finance enhancements to financial value chain (Customer Experience)

Figure 24 Open finance enhancements



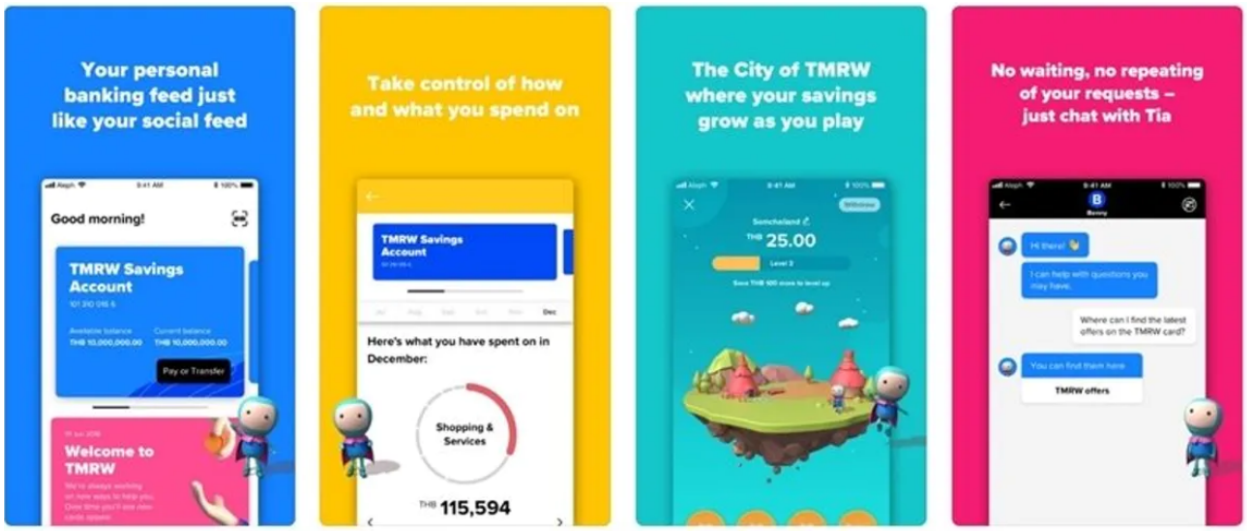
Source: Author's own

Personal finance management services: Through data sharing enabled by open finance coupled with data analytics and digital capabilities, customers can manage their personal finances on a consolidated platform to support financial goals and make better personalized financial decisions around saving, budgeting, paying bills, and investing. For example, data insights from transaction data can be used to remind customers when to make payments on regular bills or assist with budgeting expenses.

CASE STUDY: UOB's digital banking subsidiary TMRW powered by Meniga

In 2019, Singaporean based UOB bank launched a digital banking subsidiary TMRW, a mobile only bank designed with a core focus on customer centricity for the Southeast Asian millennial market. UOB partnered with Meniga by using APIs to deliver personal finance capabilities such as having the TMRW app analyze and predict cash flow in accounts and patterns of upcoming payments. Other in-app features also include spend tracking which allows simple budgeting and spend notification, and smart saving functionality that offers personalized saving advice and gamification.

Figure 25 Digital experience offered by UOB, Meniga partnership



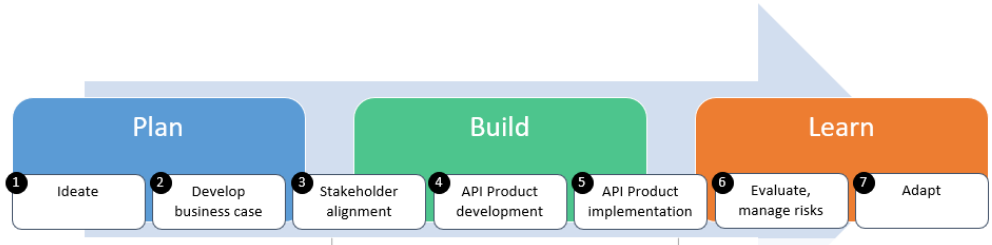
Source: Meniga[18]

[18] Fintech News talks to UOB and Meniga about the groundbreaking TMRW digital banking app. Retrieved July 7, 2021, from https://www.meniga.com/blog/fintech-news-talks-to-uob-and-meniga-about-the-groundbreaking

How can banks overcome challenges to open finance adoption?

Banks looking to respond to the open finance opportunity will need a fresh approach to innovation. Banks may face several new challenges as they progress across the open finance innovation stages. According to the Gini Open Banking 2020 survey of bankers across Asia-Pacific, bankers face challenges primarily related to commercial, technical and regulatory issues (Figure 26). From planning to building to learning, banks need to ensure that key questions around commercial viability, aligning operational models for digital change and managing regulatory risks are addressed.

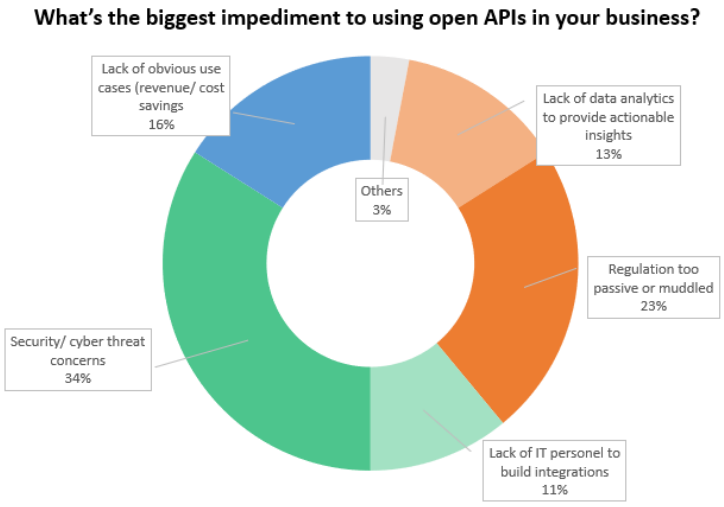
Figure 26 Open Finance Innovation Process



Key questions	• What are the key use cases that our customers are likely to have? • What is the commercial viability – cost, revenue, ROI?	• How do we align cross functional teams for change? • How do we adopt operational models for digital transformation?	• Are regulatory and operational risk concerns being properly addressed?
Challenges	• Lack of obvious use cases (revenues/ cost savings)	• Lack of IT people to build integration	• Lack of regulatory clarity
Recommendations	• Have a clear business case for open finance – especially around platforms/ ecosystems	• Partner with technology partners like API aggregators, developers to simplify API development process • Encourage agile transformation through experimentation	• Convene industry-led pilots/ sandboxes to develop Open API applications

Source: Author's own

Figure 27 Challenges to open finance



Source: Gini[19]

Challenge 1. Unable to articulate clear business case for open finance adoption

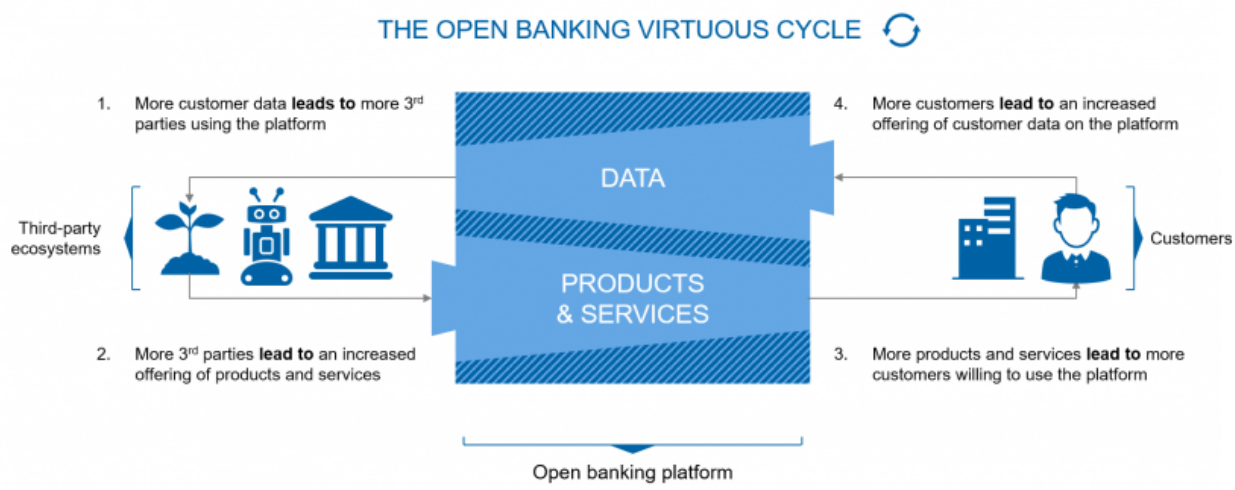
Banks may struggle to articulate the commercial opportunity for open finance and use cases to meet the needs of their customers. 16% of bank respondents surveyed by Gini cited a lack of obvious use cases as the biggest impediment to using open APIs.

Some bankers might view open finance to be a threat that opens banks to increased competition and erodes the banks' competitive advantage as trusted data custodians and direct customer channels. The traditional approach is a vertically integrated, "walled garden" offering to build a competitive moat around their customers.

A mindset shift is required for banks to tap into the broader addressable market of digital finance opportunities while remaining competitive against new entrants. Open finance provides an opportunity for banks to respond to competition by accessing platforms which can provide access to new customers, new data sets, and new products. Through ecosystem partnerships, banks can work with partners to lower the cost of new customer acquisition, co-create new products and services, and improve delivery of customer experience. Network externalities can be generated through this virtuous feedback loop of opening customer data which leads to more third parties participating in the partner ecosystem to offer a wider range of products and services – as a result, more products and services will lead to more customers joining the platform, which will in turn, generate more value from increased customer data.

[19]Open Banking 2020 Research Report, Gini

Figure 28 Platform strategy and network effects for banks



Source: Banking Hub[20]

Recommendation:

- Have a clear business case for open finance – especially around platforms/ ecosystems. Banks need to build their open finance business case with a longer-term horizon in mind. Moving from pipelines to platforms, banks need to broaden their understanding of value creation and explore new monetization opportunities. Banks who act fast may gain from a 'first-mover' advantage by establishing strategic partnerships and having a greater say in developing API standards.

[20] Open banking poker—Winner takes all. (2020, February 18). BankingHub. https://www.bankinghub.eu/innovation-digital/open-banking-poker

CASE STUDY: UnionBank API Marketplace Strategy

UnionBank, one of the largest banks in the Philippines (currently ranked 7th in assets) and an early adopter of digital-first principles, has incorporated a successful platform strategy to grow their business. In 2018, UnionBank launched an API marketplace that empowers developers and fintech companies to create new products and services by exposing a range of APIs from both UnionBank and other fintech publishers. To date, UnionBank's API marketplace is one of the largest in Asia, with over 600 open APIs ranging from account opening, authentication, payments, transfers, credit information. For UnionBank, opening up APIs enables the bank to collaborate with the broader fintech ecosystem to reach a wider consumer base and also gain insight into the needs of customers.

UnionBank API Developer Portal, developer.unionbankph.com

Results

- API monetization: USD 59 million worth of transactions have been transacted through the bank's APIs from both corporate and retail customers between 2016 to 2019[21]
- Increased customer base: The bank estimates that nearly 40% of fintech in the Philippines will be using APIs on UnionBank's portal, which enables UnionBank to access over 30 million Filipinos who consume its APIs via fintech

Challenge 2. Organization / operating model not adapted for digital success

Banks face organizational and capacity constraints in integrating open API products. 11% of bank respondents surveyed by Gini cited lack of IT personnel to build integrations as one of the biggest impediments to using open APIs in their businesses.

Fragmented, siloed internal processes at large traditional banks hinder effective integration of APIs. Traditional banks typically operate on large monolithic architecture that host a variety of legacy systems. Monolithic applications with multiple point-to-point integrations and batch processing result in fragmented processing of data, and unwarranted / inefficient (and at times, manual) data flows between systems.

Often when working with banks with complex legacy back office environments and different levels of API openness, it is difficult for third parties to integrate into these legacy systems. The time and cost involved to build and maintain custom APIs, particularly when pursued on a bilateral basis with multiple partners, can make it prohibitive for banks to undertake open finance initiatives. Some worry that proceeding with digital transformation will require a "rip and replace" approach that will impose huge cost and high complexity resulting in overrun and overspent IT implementation projects.

Open finance implementation is not a "one-size-fit-all" approach – instead, banks can take a phased approach to transformation. As banks progress along their digital transformation journey, banks have to consider adapting their monolithic applications to adopt a more agile and scalable microservices architecture. This will require a significant change in the way data is processed (e.g. moving from batch processing to real-time/ micro-batch processing), and will have operational implications on processes, governance, training.

[21] How Philippines' UnionBank is Reinventing Themselves for a Digital World. (2019, November 20). Fintech Singapore. https://fintechnews.sg/35216/fintechphilippines/how-unionbank-of-the-philippines-is-reinventing-themselves-for-a-digital-economy/

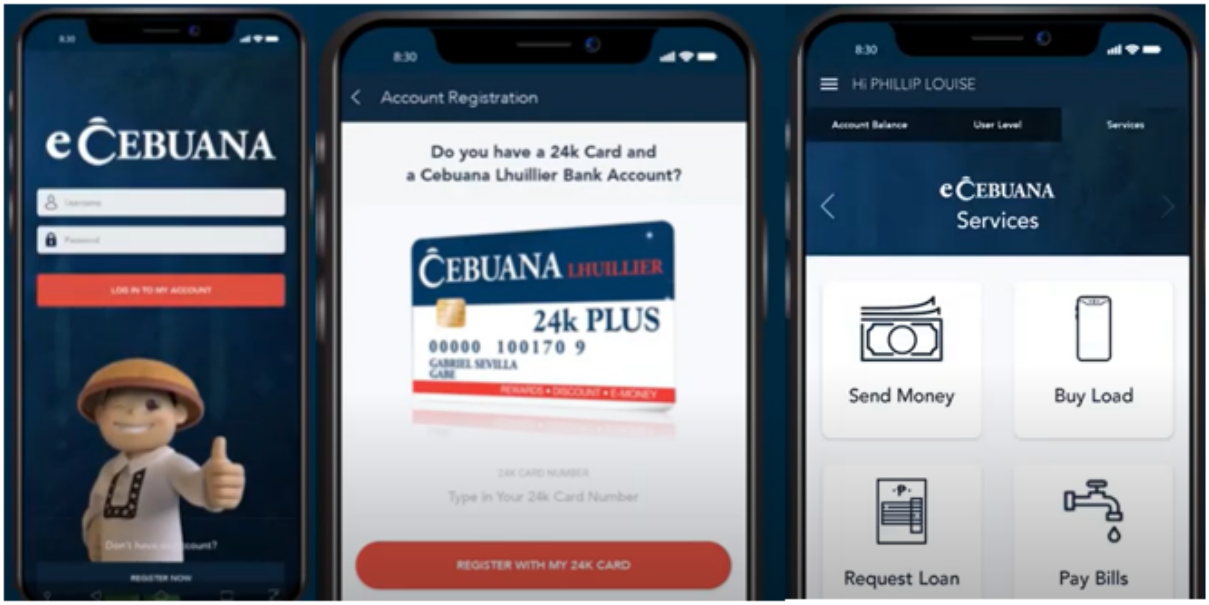
Recommendation:

- Partner with technology partners like API aggregators, developers to simplify API development process
  API aggregators help banks connect to a single point of application regardless of which APIs or services it integrates with. By partnering with API aggregators who typically have a strong developer-centric mindset, banks can lower the initial investment cost and time required to build their own API portals.
- Encourage agile transformation through experimentation
  Adopting an agile and experimental mindset by piloting new technologies can help to reduce the risks and control the cost of digital transformation. Piloting around a clear business case makes it easier for the business sponsor to demonstrate success and obtain further buy-in from stakeholders across other business units.

CASE STUDY: Cebuana Lhuillier digital transformation through a hybrid online-offline approach

Cebuana Lhuillier is the Philippines' leading and largest micro financial services provider specializing in pawning, remittance, microinsurance and micro-savings across 2,500 branches in the archipelago. To meet the needs of their customers, Cebuana Lhuillier launched an eCebuana mobile bank to enable customers to register for their micro-savings account online and access other financial services such as bill payments, remittance, loan application, buying mobile credit.

To efficiently drive digital transformation, Cebuana Lhuillier explored a new software development methodology and architecture, relying on a modern API-based architecture that allows eCebuana to use other Cebuana APIs (like domestic remittance), connect external APIs (like bill payments and telco credit), and expose their own eCebuana APIs to third parties. This new system brought standardization and simplicity, creating a single point of contact between the eCebuana app, internal and external services.



Results

- Successful transition from brick and mortar to omni channel strategy: the eCebuana application provided a simple and convenient digital alternative for customers to access banking services online
- Growth: eCebuana registered users grew from 0 to 300K, driving up to 70k transactions with a total transaction volume of up to USD 8 million within the first year of implementation[22]

Challenge 3. Lack of regulatory clarity

While regulators in the ASEAN region are generally welcoming of open finance developments, the regulatory environment around open finance is still nascent and evolving. 23% of bank respondents surveyed by Gini cited having muddled / passive regulations as one of the biggest impediments to using open APIs in their businesses.

Given that open finance is premised on consent-driven sharing of customer data between financial institutions and third-party providers, it is important for open finance participants to comply with existing legal and regulatory requirements around privacy and data protection. With the adoption of the ASEAN Framework on Personal Data Protection in 2016[23], countries across ASEAN have worked to put in place guidelines around personal data protection. Challenges may arise when requirements around data privacy are not updated for the adoption of open finance (e.g. navigating legal hurdles to figure out instances in which digital signatures can replace wet-ink signatures in digital consent flows) and may pose as extra compliance costs on financial institutions. In countries like Indonesia where there is no national data protection authority for data privacy, it becomes harder to navigate the challenging legal landscape.

The uncertainty around liability in the context of open finance is another challenge that banks face. Questions persist such as how liability should be distributed between banks and third parties around concerns of cybersecurity breaches, fraud, data loss, unauthorized payments and potential disputes resolution. This is particularly challenging as third-party players – who are typically smaller firms – may not have the necessary risk management frameworks and robust internal controls that are common practice in the banking sector.

As there are many regulatory questions that need to be addressed around open finance, regulators tend to take a top-down approach to approving open finance projects. This process of ensuring legal compliance especially in grey areas not fully

[22] Case Study: eCebuana/ Brankas - A Mobile Fintech App for the Newly Banked (2021) Open Future World
[23] ASEAN Framework on Personal Data Protection (2016)

covered by existing regulations results in a bottleneck when banks are looking to implement open finance projects.

Recommendation:

- Convene industry-led pilots/ sandboxes to develop open finance applications Experimentation through pilots/ sandboxes are low-risk ways for banks to engage in open finance initiatives, while navigating the regulatory challenges under supervision of regulators. A “top-down”, “one-size-fit-all” approach to open finance regulation should not be the template for engagement, but rather proactive industry–regulator engagement should be considered to create space for dialogue and consultation. Banks and technology providers can convene industry pilots to test out use cases for open finance while obtaining feedback on market demand based on voluntary participation. At the same time, regulators can monitor these pilots to ensure compliance with existing regulations, assess real-world open finance activities and cater guidelines to address risk and support the development of open finance.

Practical next steps for banks

Product

New product opportunities for open finance

Be future payments ready

Banks can embrace open finance by offering digital payment applications that enable account to account transfers. Banks already have a competitive advantage in having access to real-time payment rails that they can leverage. Solving for essential services like payments ensures that banks remain relevant to the needs of different customers including retail, corporate, SME merchants.

Create new digital onboarding and KYC experiences

Banks can offer streamlined digital onboarding and online account opening leveraging e-KYC, digital identity solutions. Designing for a digital, secure, and customer-centric experience is essential to removing friction in expanding access to finance services.

Business

New business models for open finance

Offer API-as-a-service

Open finance allows banks to explore new monetization opportunities. API-as-a-service model can allow banks to experiment with new business and revenue models by offering payments, KYC, data aggregation services to third-party providers at a price-per-call.

Embrace ecosystem partnerships

Banks can embrace embedded finance partnerships for new growth and distribution opportunities. By partnering with fintech and/or brands with closer access to customers (such as digital wallet providers, superapps, non-bank players across other verticals), banks can explore new avenues to enhance their total addressable market and increase customer lifetime value. Setting up dedicated teams with clear KPIs around business development and partner onboarding can help position banks for success.

Technology

Technology considerations for open finance

Adopt an API-first mindset

Banks should consider adopting an API-first approach by incorporating the following technology decisions – upgrade legacy systems for microservices architecture, build developer portal capabilities to streamline integrations, and embrace agile development approaches.

Appendix: Open finance regulatory landscape in select ASEAN countries

Central banks in the region are keen for open finance to be a catalyst for digital transformation and financial inclusion but have taken different approaches to developing the industry (Table 2).

Table 2: Open Finance Regulations across various ASEAN jurisdictions

Countries	Indonesia	Philippines	Singapore	Thailand
Open Finance framework	Indonesia Payment Systems (IPS) blueprint 2025	Open Finance Framework (2021)	Open API Playbook (2016)	Payment System Roadmap (2019-2021)
Data privacy	Personal Data Protection Bill (draft – expected 2021)	Data Privacy Act (2012)	Personal Data Protection Act (2014)	Personal Data Protection Act (expected 2022)
Regulators	Bank Indonesia (BI) and Otoritas Jasa Keuangan (OJK)	Bangko Sentral ng Pilipinas (BSP) and National Privacy Commission (NPC)	Monetary Authority of Singapore (MAS)	Bank of Thailand (BOT)

- In the Philippines, the Bangko Sentral ng Pilipinas (BSP) recently approved new guidelines for the Open Finance Framework on June 10, 2021[24]. The BSP is a strong proponent of open finance and part of the said framework is to establish an industry-led self-governing body to facilitate the development of technical standards and regulations. The Open Finance Framework also contains provisions on registration/compliance requirements for third party service providers engaging in the AISP and PISP model, plus content on IT infrastructure standards, data security standards, consumer protection measures and other relevant matters. Complementing these Open Finance regulations are the data privacy regulations in the Philippines, including the Data Privacy Act of 2012, and its implementing rules and regulations issued by the National Privacy Commission (NPC). Simultaneously, the BSP also approved an open finance industry-led pilot where 14 medium to large banks and e-wallets have already confirmed interest to participate.

[24] Bangko Sentral ng Pilipinas Media and Research. Retrieved July 7, 2021, from https://www.bsp.gov.ph/SitePages/MediaAndResearch/MediaDisp.aspx?ItemId=5826

- In Indonesia, Bank Indonesia (BI) and Otoritas Jasa Keuangan (OJK) have expressed support for Open Banking as part of the digital financial transformation policies included in the Financial Sector Master Plan[25]. Bank Indonesia ("BI") has put in place its Indonesia Payment System Vision 2025[26]. The Vision laid out five main and related deliverables as its primary subject matters, namely: open Banking; retail payment systems; financial market infrastructure; data; and regulatory, licensing and supervision. BI recognizes payment initiation service providers (PISP) and account information service providers (AISP) as being part of the Open Banking world, whereby regulations to govern PISP and AISP business models are intended to be issued Q1 of 2021. Customer protection mandates will be further detailed in the upcoming Personal Data Privacy bill which is pending legislative approval.
- In Singapore, there is no mandatory requirement for banks to implement open banking. However, the Monetary Authority of Singapore (MAS) supports industry initiatives such as Finance-as-a-Service API Playbook, which contains principles on API governance, implementation, use cases, design principles, and 400 recommended API services (ex. Product, Marketing, Sales, Payment, Transaction, etc.). MAS also launched the API Exchange (APIX) in 2018. It was developed and is operated by the ASEAN Financial Innovation Network (AFIN), a non-profit entity jointly formed by the MAS, the World Bank Group's International Finance Corporation (IFC) and the ASEAN Bankers Association. It is a global, open-architecture platform that serves as a marketplace for fintech and financial institutions to connect, share ideas and innovate collaboratively in a sandbox. The MAS Open API Register found in the APIX platform contains a list of available bank and Central Bank APIs for market participants to access.
- In Thailand, there has yet to be any formal guidelines around open finance – however the Bank of Thailand (BOT) is highly supportive of digital transformation initiatives for the industry. The BOT is pursuing Payment Systems Roadmap No. 4 ("Roadmap") in 2019-2021 which is a part of the National e-Payment Master Plan created by the Ministry of Finance and the BOT. The plan aims to promote the use of effective, safe and low-cost electronic payment services in all sectors. Within the Roadmap, there are a few initiatives that are paving the ground for Open Banking: (1) The BOT has created a working group to test bank statement sharing among selected banks. Part of the initiatives here is to conduct a similar Open Banking Pilot incorporating the AISP model. In the future, the BOT aims to include non-banks as participants. (2) Interoperable infrastructure includes developing a biometrics standard for identity authentication (i.e., NDID) in the e-KYC process to promote people's convenient and fast access and usage of digital payments while emphasizing the secure and safe authentication process. The BOT has approved banks to

[25] Master Plan Sektor Jasa Keuangan Indonesia 2021-2025, Otoritas Jasa Keuangan (OJK) (2021)
[26] Blueprint Sistem Pembayaran Indonesia 2025, Bank Indonesia (BI) (2021)

provide online cross-bank identity verification for opening bank accounts in the regulatory sandbox. This new identity verification mechanism will allow customers to be able to open saving accounts with new banks by using information from bank accounts which they already have with their existing bank.

About Us

Brankas is the leading Open Finance technology provider in Southeast Asia. They provide API-based solutions, data and payment solutions for financial service providers (like banks, lenders and e-wallets) and online businesses. Brankas partners with banks to build and manage their Open Finance infrastructure, producing APIs for real-time payments, identity and data, new account opening, remittances, and more. With Brankas' secure Open Banking technology, online businesses, fintech companies and digital banks can leverage Brankas APIs to craft new digital experiences for their users.

Integra Partners is a venture capital firm based in Singapore. Integra invests in and partners with technology entrepreneurs that drive access and affordability to responsible financial services and digital healthcare in South and Southeast Asia. With financial services, insurance and healthcare being structurally interdependent sectors, Integra takes a multidisciplinary approach in investing across these sectors, building a mutually beneficial ecosystem across start-ups, strategic corporates, co-investors and regulators. Integra is a strong believer that open finance is a core enabler of inclusive economic growth, increasing access and affordability, and eliminating unnecessary friction for all digital commerce. Integra has been an investor in Brankas since 2019.

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