

04 **Thailand**

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Summary Frame

Country summary: Thailand =

Country group	UMIC
% adults with a financial account (Findex, 2017)	82%

ACCOUNT TO ACCOUNT R/T:

Name of scheme/s	PromptPay
Date of launch	Activated Nov 2016, officially launched Jan 2017
Scheme manager	National (Interbank Transaction Management and Exchange) Company (NITMX) - owned by 10 banks
Switch operator	Payment Systems Office (funded and run by Thai Bankers Association) in conjunctions with bank committee & NITMIX
% financial accounts included in scheme	28 banks directly and 6 of 29 non-bank wallets indirectly

Highlights from country:

- Regulator initiated and led initiative, implemented by the industry.
- Thailand's policy maker seems to use soft mandates to push greater usage of digital payments to support a stronger digital economy.
- PromptPay was conceived as part of a national e-payment plan and implemented by the industry. Welfare payments as the first use case.
- According to ACI, Thailand has the highest share of volumes for instant payments as a proportion of non-cash payments- 15.4% (Compares to UK's 6.4%).
- In Apr 2021, Thailand's PromptPay linked to Singapore's PayNow, the first linkage of Real-time Payment Systems to facilitate interoperable instant cross border transactions.

INTEROPERABILITY JOURNEY:

- Starting in 1993 PCC, a bank JV, had facilitated real time payment bank interoperability while the BOT owned and operated other systemically important payment systems (Ex. BAHTNET, ECS).
- In 2005, BOT changed its role to the oversight of the local payment systems and gradually shifted the role of payment service provider to the private sector. NITMX was established by the Thai Bankers' Association under direction of PSC to develop and provide the electronic payment infrastructure of Thailand. It operated 4 payment schemes (ATM switch, card switch, bulk payments and single fund transfer).
- In 2015, as part of its third payments roadmap, the BOT decided that real time payments should be modernized. As part of this roadmap the National e-Payment Master Plan was announced, with an objective to create an integrated digital infrastructure in Thailand; PromptPay was one of the five projects under this plan.
- To implement the plan, BOT moved responsibility for alias (ID and mobile number proxy) real time payments to NITMX, who procured infrastructure from the UK and then overlaid local customizations to launch PromptPay in 2016. Account to account (A2A) near real time payments stayed with PCC.
- In November 2016 PromptPay services were gradually activated with government transfers, particularly child support payment, being the first use case. Other use cases and enhanced features followed.
- BOT forced PCC to move A2A payments to PromptPay in 2018; by 2019 PromptPay had achieved an average of about 214 mil transactions per month, growing to 442 mil in 2020.

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Calibrating the role of **public sector in PromptPay**



Funding & implementation role

In setup and beyond	0: None	1: Participate/ co-fund	2. Incubate only	3: Sole fund
0: Endorse		• BOT has always been in the driver seat through Payment System Committee (PSC), a key BOT committee established in 2001 to formulate the national payments policies and directions/		
1: Catalyze 1Encouragea		 roadmaps and other implementation working committees and subcommittees e.g formation of NITMX PromptPay emerged from the National e-Payment Master Plan and the third Payment Systems Roadmap (2015) which were hatched by an 		At this level, regulator applies moral suasion but takes no direct action
2: Catalyze 2 -Actively convene & participate	PromptPay	 inter-ministerial and payments sector committee of which BOT was the secretary. Implementation of PromptPay was assigned to BOT, but funding is entirely private sector (Thai Bank Association (TBA). The Third Roadmap also created a payment 		Regulator also takes direct steps, such as studies, convening or threats
3: Mandate		 system office (PSO), a neutral body funded and run by the TBA on behalf of the BOT which essentially is the scheme manager of PromptPay (except for its inability to sanction scheme rule breaches). Welfare payments was the first use case to be 		 Mandate could include 1 or more of: Required connection to central switch Required participation in a scheme Method and/or level of interparty fees set
Oversee		 At the same time, BOT had prescribed certain ceiling fees for services to consumers e.g. Promptpay retail fees. However, the zero transaction fee for all consumer payments below Baht 5,000 is commercial decision of the banks. Not all banks are prescribed to the services offered by NITMX as it is a voluntary scheme. 		Typical role may be oversight, but this may not apply to non-prominent RPS

Policy role



PromptPay Interoperability summary frame

Regulator initiated and led initiative, implemented by the industry

A2A or CICO		PUBLIC POLICY ROLE IN INCEPTION			PUBLIC ROLE IN IMPLEMENTATION					
		0. Endorse	1. Catalyze 1	2. Catalyze 2	3. Mandate	None	0. None	1. Co-fund	2. Incubate	3. Fund and own
	0. Uncertain /too early									
O U T C	1. Below expectations									
O M E	2. In line with expectations									
	3. Above expectations			PromtPay			PromtPay			

PromptPay has surpassed expectations for several reasons. Since the start of the scheme, transactions have increased 250% every year. Further, all banks (28) and many e-wallets (6) have joined the scheme, there is nearly 100% coverage for transfer, and merchant payments are doing well. According to the ACI Thailand has the highest share of volumes for instant payments as a proportion of non-cash payments, 15.4%.



PromptPay: Features and Economics

Year launched: Activated: Nov

2016, but officially launched in Jan 2017 by the Ministry of Finance ,Bank of Thailand and the Thai Bankers' Association Official launch.

Speed of posting to accounts: Real Time (Max 60 seconds)

Maximum value: No transaction limit, However, participating financial institutions can set channel / transaction type / customer-wise limits, if they deem it necessary.

Channels: Mobile banking, Internet banking, bank branches and ATMs

Use Cases: P2P, P2B, B2P, G2P, P2G (mostly limited to tax department),

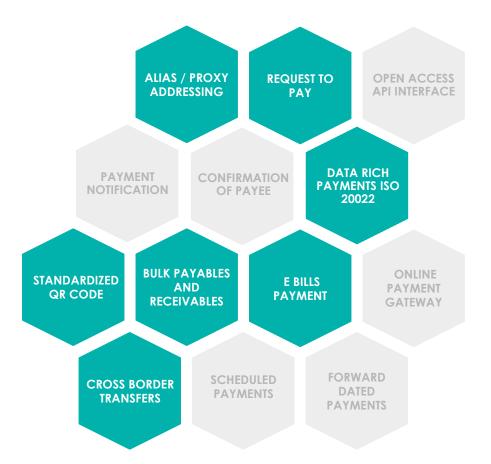
Objectives:

- Reduce the cost of payment system expenses and increase the linkage of various payment services for the highest efficiency and security;
- Lay the foundation for the development of the digital economy of Thailand, including modernized payment infrastructure;
- Support Thailand's transition from a cash to a cashless society; and
- Allow banks to disrupt themselves before the fintechs can.

Operating hours: 24/7/365

Instruments: Bank accounts and digital wallets

Consumer fees: In most instances, consumer transactions below THB 5,000 (about USD 150) are free. This is due to a "no fee campaign" instigated by the commercial banks in reaction to a tiered pricing regulation imposed by BOT. Transactions between Baht 5,000-30,000 incur a maximum fee of Baht 2, transfers between Baht 30,000-100,000 incur a maximum fee of Baht 5 and a fee of no more than Baht 10 charged for transfers exceeding Baht 100,000.



PromptPay: There are a variety of fees



Joining fee paid to NITMX is based on two components:

- Size of the bank: Three tiers have been created based on the size -large, medium and small; larger banks are required to pay a higher joining fee
- Number of services
 subscribed to by the participants: Participants
 can choose the number of
 services availed through
 PromptPay. Joining fee
 varies based on the number
 of services subscribed to.
 Majority of charges are
 associated with fund
 transfer service as it
 determines the amount of
 investment needed to
 connect with PromptPay.

Switching fees paid to NITMX

•

Variable fee is based on the number of monthly transactions submitted by a participant. This also follows a tiered approach. Large banks usually process higher number of transactions through the system because of large customer base: these banks are given cheaper tier for variable fee)

Interchange Fees paid to participants

- Inter-bank transactions have an interchange fee. The Joint Steering Committee of the Payment Systems Office (PSO) is responsible for determining interchange fee based on consensus among participants.
- Average fee of 0.15/0.17 that the receiving bank pays to the sending bank.
- For QR payments/ merchant payments - the receiver pays back the sending institution (issuer) 0.15 Bhat.
- There will be zero interchange fee in this scheme from 2023 due to an industry agreement. They are trying to simplify the model when doing net settlement.

Fees charged to indirect participants

- There is "discrimanation" fee that ewallet players pay to sponsor bank to access PromptPay - 75 basis point, but maximum limit per transfer.
- This fee charged by direct participants to sub-member Fls is based on the bilateral agreement between the parties. No guidelines have been provided by BOT/ITMX but some stakeholders have said it is identical across banks and is set by the TBA.

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Setup andOwnership

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PromptPay: Background and Objective

- In 2015, the BOT pushed forward development of innovative payment services and infrastructure with key stakeholders through the <u>e-Payment Working Committee (EWC)</u>. The BOT joined and acted as secretary of the group.
- The National e-Payment Master Plan was an output of the committee. It encompassed 5 projects:
 - PromptPay,
 - Card usage expansion,
 - e-Tax and e-Document systems (e-Tax invoicing system),
 - Government e-Payment (G2P),
 - e-Transaction literacy and promotion.

The objectives behind PromptPay were three-fold:

- Government aimed to transition Thailand to an enhanced digital economy (Thailand 4.0);
- BOT looked forward to efficient flow of funds by moving away from heavy reliance on cash; and
- Thai Bank Assoc were motivated by the looming threat of disruption by the fintechs and the promise of reduced costs of cash handling.



PromptPay: Background and Role of Regulator

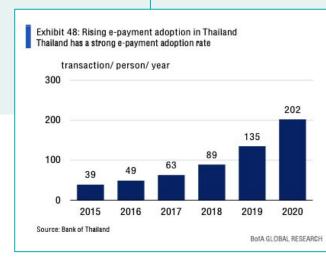
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Endorsement of Regulator: The endorsement by the BOT of PromptPay, both in its public announcements and through its actions (G2P), has had a significant impact on adoption as Thais trust authority figures, especially the regulator due to cultural reasons.

- Government payments as a driver: G2P was the first use case, which showed government support for PromptPay and allowed the government to leverage its social payments to kickstart acceptance. The 50+50 wallets introduced during covid reinforced this as well as increased merchant payments due to the targeted subsidies. The government continues to provide incentives to use PromptPay e.g tax reimbursements can only be done via PromptPay and tax returns can be submitted later if one uses PromptPay.
- Pricing: Although BOT had introduced tiered pricing for PromptPay, given the operational difficulties and costs associated to this tiered pricina and the possibility that consumers would try to game the system by sending several transfers under the initial "free" threshold, SCB bank decided to temporarily waive the fee for all consumers up to Bhat 5,000. All other commercial banks followed suit within 48 hours, and since then zero pricing has remained in place. This zero pricing for consumers was cited by all interviewees as the main reason for consumer adoption.
- Standardized QR codes & branding:

Standardized QR codes significantly increased merchant payments, especially in rural areas/ for SMEs, thereby achieving higher adoption. The decision also to use unified branding around PromptPay ensured there was no confusion among consumers or merchants, and simplifies the process. In comparison Singapore's roll out has been marred by lack of a unified brand.



Source: BFA interviews (2021)

PromptPay: Scheme Operations

Scheme operator: National ITMX Co., Ltd. (NITMX)

- National ITMX, is the operator of Thailand's interbank payments network. It also takes decisions on the scheme rules in conjunction with Payment System Office (PSO).
- NITMX is wholly owned by 10 Thai commercial banks: Bangkok Bank, Krungthai Bank, Kasikorn Bank, Siam Commercial Bank, Krungsri Bank, Thai Military Bank, United Overseas Bank, Standard Chartered Bank (Thai), CIMB Thai, and Thanachart Bank.
- **NITMX** was tasked in 2005 by the PSC per the BOT Payment System Roadmap 1 with developing and providing the electronic payment infrastructure of Thailand, apart from the highly important payment systems: BAHTNET system (Bank of Thailand Automated High-value Transfer Network) and ICAS system (Imaged Cheque Clearing and Archive System), which are the systems established and operated by the BOT. Prior to launching PromptPay in 2016, NITMX operated four other payment systems (ATM switch, card switch, bulk payments and single fund transfer for Branch and ATMs).
- NITMX was established and funded by the Thai Bankers' Association under direction of Payment System Committee (PSC) governed by Bank of Thailand (BOT). NITMX operates an "FMI" under Thai law - a Financial Market Infrastructure.
- In order to launch PromptPay in 2016, NITMX procured Vocalink's instant payments technology and overlaid local customizations. The BOT closely monitored the development of the system and participated in testing as well as performed oversight activities such as system security, monitoring of issue resolution/ rectification, user protection and personal data privacy.

Its governance framework and membership:

- NITMX has a board of directors representing senior management of the bank's shareholder members appointed by the Board of Directors and/or the President of the Bank and the Secretary-General of the Bankers' Association Acting as a director of the Company to set policies, screen and supervise and monitor the Company's performance. See the charter policy <u>here</u>. (ITMX)
- The Board of Directors of NITMX consist of 9 members, six of which are from major banks in Thailand, one member from Thai Bankers Association, Managing Director (ITMX), and one independent member. BOT does not sit on the board but <u>did so in its early days</u>.
- There are no non-banks represented in NITMIX; non-banks are only represented through their sponsor banks. This is due to the fact that ostensibly the non-banks did not fund initial infrastructure.
- NITMX has <u>29 member banks</u>. Although not members, non-bank can participate indirectly and there are currently 6 non-banks who are indirect participants.

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PromptPay: Scheme Governance & Oversight

Scheme manager: Payment System Office (PSO)

- BOT in the Payment Systems Roadmap 2012 – 2016 also set out a Payment System Office (PSO); the PSO is a neutral body that the Thai Bank Association is funding and running on behalf of the BOT which is acting essentially as the scheme manager (except for its inability to sanction scheme rule breaches).
- The PSO has established a governance structure in the form of a joint steering committee that comprises members from commercial banks in Thailand.
- Takes decisions on the scheme rules in conjunction with NITMX. The BOT, however, has final say and is the only entity that can sanction breaches.

Overseer/ regulator: Bank of Thailand

- The Bank of Thailand (BOT) is responsible for the oversight of operators/ service providers of the payment systems under the Payment Systems Act B.E. 2560 (2017) (Payment Systems Act).
- It is important to note that while **BOT provides** oversight and supervision, it makes recommendations to the Ministry of Finance to grant licenses to payment systems business providers and payment service providers under the Payment Systems Act B.E.2560 (2017).

Settlement: Bank of Thailand

- BOT has remained the sole operator of BAHTNET, the Real Time Gross Settlement System (RTGS).
- BAHTNET facilitates the final settlement of interbank payment transactions that occurs through PromptPay.

Payment System Committee (PSC) of the Bank of Thailand

- Established in 2001 to supervise policy issues concerning payment systems of the country.
- PSC is one of the main committees of BOT and is responsible for setting policy of payment systems for the BOT to align with business development and technological advancement.
- The PSC is chaired by the Governor and composed of internal BOT executive staff as well as external experts. In recent years, it has included the Thai Bankers' Association Chairman and some private sector leaders e.g. Vice Chairman of Federation of Thai Industries.
- The PSC approved Payment Systems Roadmap 2012 2016 which setup PromptPay and the Payment Systems Office.

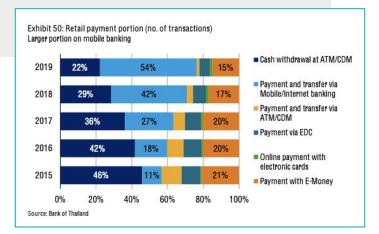


PromptPay: Competition outcomes



Banks use scheme to up their competitive advantage & create barriers for ewallets

- Sector historically dominated by banks. First near real time payments system was run by PCC, a joint venture between the 2 biggest banks. In the context of PromptPay, banks own and control scheme through a consortium (NITMX) as well as control governance through the TBA who runs the PSO.
- This domination has **allowed banks to impede non-bank growth**. One of the reasons for PromptPay was to "kill the ewallet" as it was perceived as a threat.
- According to the ewallets, prior to PromptPay, wallets had two main benefits: (i) closed loop network transfer was free and instant (for P2P), and (ii) easy to register wallet and do KYC at home as no need for a bank account. In comparison, full KYC is required at the bank, there is a one or two day waiting period to receive funds, and even closed loop transfer (within the bank) requires full KYC. So PromptPay allowed banks to offer cheap and real time transfer in order to compete with ewallet services.
- PromptPay has allowed the **erection of barriers**:
 - Technical barriers (high IT requirements to integrate);
 - Cost barriers (discrimination fee paid by ewallets to sponsor bank to use PromptPay which renders them less competitive, very high fees for cash out as controlled by banks); and
 - Structural barriers (non banks cannot be direct participants of scheme, non banks are not part of the governance structure);
- Banks argue that the **barriers are legitimate** non banks did not invest in infrastructure and do not have the right level of IT requirements to participate but also admit that PromptPay was required as "we needed to disrupt ourselves before the fintechs disrupt ourselves".
- **The barriers are working** Ewallet payments made up 21% of retail payments in 2015, but by 2019 only 15%, as per chart.
- **BOT is trying to eliminate these barriers** and wants PromptPay to attract new players, including non bank players, but there appears to be some regulatory capture.



The introduction of PromptPay in 2017 resulted in a doubling of the number of payment and transfer transactions via mobile/ internet banking in 2019, but also a 25% decrease in the number of e-money payment transactions.

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PromptPay: Competition Outcomes

- The payments market is dominated by a concentration of banks, with the 5 largest banks by asset size covering 80% of the market.
- Following the introduction of PromptPay, we see an **increase in the numbers of registered ewallets** (from 16 in 2018 when the Payment Services Act is implemented that required registration, to 29 in 2021) as well as a **small decrease in the number of eligible banks** (from 36 to 35); it is not clear if there is a causal link between PromptPay's introduction and the market evolution.
- The introduction of PromptPay, however, did result in **a lowering of consumer prices to zero** due to commercial bank rivalry, which has contributed to **strong adoption**:
 - Transactions on the service jumped 147 percent to 2.6 billion in 2019 (worth THB 13.18 trillion WB), making it the fourth largest globally, equivalent to 38 transactions per capita. It continues to increase by 250% per year, and in 2021 it is now at 230 transactions per capita.
 - Accumulated PromptPay registered users amounted to 54.7 million as of May 2020. Compared to the number of PromptPay registered users of 13.0 million in the first month that the registration was opened in July 2016, PromptPay registered users have increased more than 4 times.
- However the number of ewallet transactions has not grown as quickly as other mobile banking/internet banking transactions, resulting in an **overall decrease of 25% in ewallet transactions** from 2017 to 2019 while mobile banking/internet banking transactions have doubled over the same period.
- This decrease in market share could partially be attributed to (i) ewallets inability to participate in PromptPay, adding cost and other barriers, and (ii) ewallets lack of representation in the scheme's governance structure, which ensures that these barriers are retained.





PromptPay: Financial Inclusion Outcomes

There were several characteristics of PromptPay that helped it support financial inclusion:

- The zero fee for consumers ensured there was no price barrier in the use of digital payments;
- The use of G2P as a primary use case pushed adoption among unbanked; and
- The coupling of merchant QR codes and subsidized wallets targeted at these merchants helped extend merchant acceptance to SMEs and thus extend the digital payments ecosystem

There are, however, certain aspects of PromptPay that are not optimal for supporting access/ usage by the low income population:

- The need to use a **smartphone**, which forecloses its adoption for the 20% who do not have them (and who are mostly unbanked);
- The need to connect a wallet to a bank account to use PromptPay, so tier 1 wallets (anonymous/ no need for official ID) do not qualify; and
- Due to regulation the banks control cash out and the banks have rendered cash out unappealing due to very high fees, so it disincentives people who need to use cash on a daily basis from storing their money in wallets.

PromptPay: Other notable lessons



Not all features support adoption, context is key...

- Although proxy was envisioned as a key feature for providing convenience and to push high usage, this was not as effective as hoped. Most Thai prefer to use account numbers to route transactions as they wish to keep their phone numbers private, and fear that taxation would make it easier to find them if they used proxies.
- Also, **request to pay** functionality has not been highly adopted for P2P because it is viewed negatively i.e more aligned to debt collection.



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Answers to Research Questions

Research question 1(a):

Why interoperability?

The **motivations for interoperability** varied depending on the stakeholder that responded:

- Government Interoperability would bring about the modernization of Thailand by pushing digital payments to facilitate a more digital economy.
- The regulator (BOT) interoperability would facilitate the **move away from a costly cash based society** (in terms of producing, delivering & handling cash), creating a more efficient financial sector.
- The banking industry (as represented by the Thai Bank Association) interoperability helped the banks to disrupt themselves before the fintechs disrupted them, allowing them to gain a competitive advantage.

Other reasons cited by stakeholders included:

- Connecting government payments to citizen ID to reduce leakage;
- Alleviating the **Chinese threat** to Thailand's monetary stability Alipay as systemic threat, creating a circuit where money from Chinese tourists never enters Thailand even if spent in Thailand;
- Updating existing payment legacy infrastructure; and
- Facilitating the **taxation of the SMEs**.



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Financial inclusion was not the key objective but the initiative has indeed supported some aspects of financial inclusion

- Financial inclusion is a **different beast in Thailand**.
 - According to <u>Findex</u>, in 2017, 78.1% had accounts (this is equivalent to 81.6% of all adults aged 15+), and all of these accounts were at financial institutions (versus 72% in 2011); 1.3% also had mobile money accounts.
 - 80% have smartphones (and 92.3% have access to mobile phones as of 2017).
 - There is a big network of ATMs, even in rural areas.
- PromptPay mainly **increased digital transactions of existing customers**, as you need to have a bank account to connect ewallet to PromptPay.
- However, with G2P and covid wallets (esp. merchant subsides), PromptPay was able to bridge the cultural gap towards digital, which expanded some access:
 - The first use case of PromptPay was G2P in 2015/2016 with social payments linked to citizens ID (proxy), which pushed many to open bank accounts at any commercial bank; money was sent by the government bank (KTB).
 - With covid 50/50 Wallet project required the poor and lower income segment to open bank accounts linked to wallets to access these subsidies (paid from govt bank). Government subsidized things such as food, transport and hotels, paying half the amount up to Bhat 150 per day for the food .For example, if the person paid using the wallet. This covered 30 million adults out of 67 million adults and has pushed merchant acceptance of wallets.
- There is also **expanding merchant access** with QR codes in rural areas. Small merchants can easily and cheaply access digital payment rails which have seen high QR penetration 7 million QR points, of which 3 million are SMEs. A huge segment of this businesses formerly operated using cash.
- But there is still **low wallets use**, and one must use a smartphone, ATM or internet banking to access PromptPay.
- PP does not solve the issues of those who do not yet have access.

Research question 2:

What are the effective policy levers for achieving interoperability success?



Although BOT has always been in the driver's seat through the Payment System Committee, **collaboration with industry** has been key:

- BOT leading the dancing by **providing clear guidance** (ex. BOT payment roadmaps) **but never being overly prescriptive**. For example:
 - Allowed for retail and wholesale pricing to be commercially determined although provided caps for both.
 - At some point wanted a uniform user interface for PromptPay but banks preferred to have their own user experience so BOT let it go.
- BOT works closely through PSO and TBA in a consultative manner as **a facilitator**. However, the lack of a clear scheme manager is considered a slight weakness from the perspective of inability to sanction effectively.
- On pricing, in particular, BOT **allowed market competition** to take over but provided strong moral suasion and guidance to ensure the retail pricing was low.
- BOT recognises its role in ensuring a fair playing field with non-banks and is working on this.

Confirmed by the interview polls:

- Participants said both the regulator and financial institutions drive interoperability.
- They generally see the regulator's approach from supportive to interventionist (with the rest of the world just supportive).

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Research question 3:

When should the foundation/ policy makers advocate for interoperability - from the beginning or let it evolve over time?

The answer lies somewhere between the two options:

1

A2A interoperability had already been entrenched in Thailand for 30 years before PromptPay introduced instant payments, so instant payment interoperability is **part of the natural evolution of the Thai payment system**.

2 BOT had, however, to **kick start the process** for the introduction of instant payments through its roadmaps and the National e-Payment Master Plan.

3

Also BOT was instrumental in involving the entire banking industry and making participation representative: PCC, which ran the initial switch, was a consortium of the two largest banks, and had left out the small players.

In Thailand the market was first allowed to evolve, but when an innovation such as market-wide instant payments did not come about organically, the regulator reconsidered its position and decided to intervene. พร้อมเพย์

Prompt Pay





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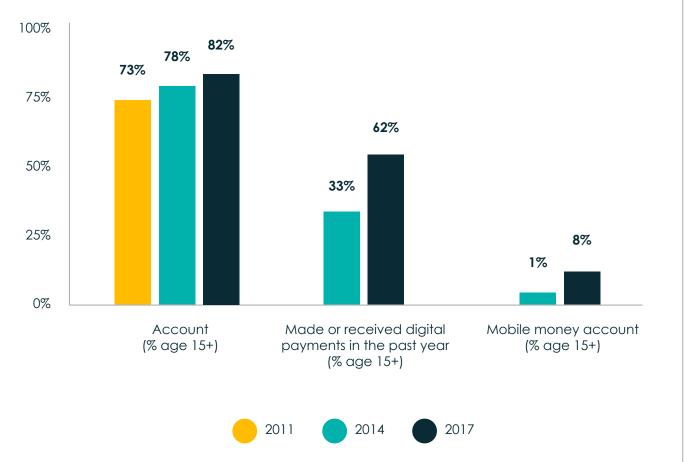


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Country context

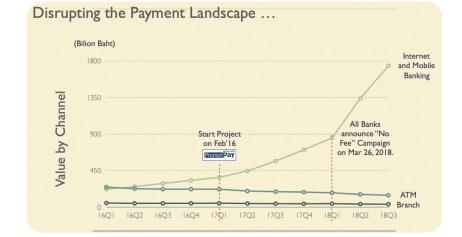






Country context

Source: World Bank 2019



Country environment

Scores:	59	69	80	69	81
Rank: 15 of 55 Weighted score: 63	Government and Policy	Stability and Integrity	Products and outlets	Consumer Protection	Infrastructure
	1. National Strategies	1. Market entry requirements	 E-money and simplified accounts 	1. Financial services users	1. Payments infrastructure
	2. Financial and digital literacy	2. Operational requirements	2. Credit	2. Insurance users	2. Connectivity
	3. Government digitisation	3. Customer due diligence	3. Emerging services	3. Data protection	3. Digital IDs
		4. Supervisory capacity	4. Inclusive insurance		4. Credit Information
		5. Cybersecurity	5. Financial outlets		Source: EIU

Source: EIU Microscope 2020z

A2A country timeline



2001: Payment System Committee (PSC) was established to supervise policy

(PSC) was established to supervise policy issues concerning payment systems of the country. 2005 The announcement of BOT to change its role to oversight of the local payment systems, gradually shifting the role of payment service provider to the private sector. This would allow for the local payment system industry to catch up with changing payment systems and procedures, an emergence of non-bank players, and the penetration of overseas service providers. 2005: National ITMX (National Interbank Transaction Management and Exchange) was established by the Thai Bankers' Association under direction of PSC to develop and provide the electronic payment infrastructure of Thailand. It was officially launched in 2006 with the objective of developing efficient payment services.

2015: BOT pushed forward development of innovative payment services and infrastructure with key stakeholders through the <u>e-Payment Working Committee (EWC)</u>,

established under PSC, consisting of commercial banks, nonbanks, Federation of Thai Industries, Thai Chamber of Commerce and Electronic Transactions Development Agency (Public Organization) or ETDA. The BOT joined and acted as secretary of the group, as well as participated in drafting the National e-Payment Master Plan.

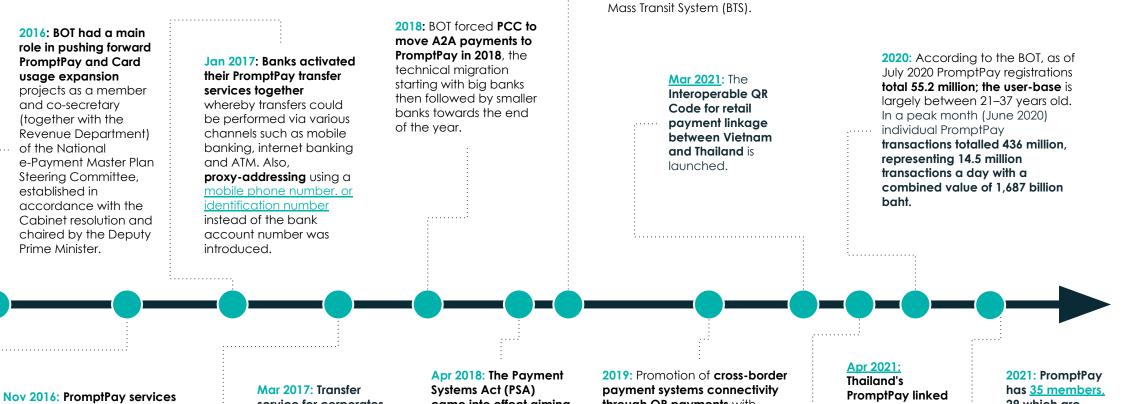
Dec 2015: The National e-Payment Master Plan was approved by the Cabinet. The Master Plan envisaged payment systems that cater to various financial transactions and economic activities with areater convenience and timeliness, being the key mechanism that strengthens the competitiveness of the business sector and Thailand. It encompassed 5 projects: PromptPay, Card usage expansion,e-Tax and e-Document systems (e-Tax invoicing system), Government e-Payment (G2P), e-Transaction literacy and promotion.

1995, 1996 and 1997: BOT launched three major payment systems i.e BAHTNET, ECS and SMART systems respectively to accommodate the national economic expansion through more convenient, quick and safe payments. 2002: The PSC approved the Payments Roadmap of 2004 (2002-2004) as a guideline for the development of payment systems of the kingdom. This included the establishment of the Subcommittee on National Payment Corporation.

Dec 2002: Sub-Committee on National Payment Corporation (SNPC) was established by PSC. Most of its members were represented by commercial banks, with a few representatives from BOT. It was ordered to: (i) Establish code of conducts for payment systems including technical standard; (ii) Formulate relevant policies to employ pertinent technology, modernize payment services and foster connections; (iii) Gather payments data and research; (iii) Consider model and approach leading to an establishment of multiparty organization for service providers carrying on payment services for its effectiveness and to take over the SNPS's tasks. June 2008: SMART Credit same day service was the first service to be smoothly transferred from the BOT's Payment Systems Division to the new operator: NITMX. It had a membership of 22 banks by year end.



A2A country timeline



Nov 2016: PromptPay services were gradually activated with government transfers, particularly child support payment, being the first welfare payment to be transferred via PromptPay on 8 December 2016. The government's decision to move its disbursements to the service was an <u>early driver</u> for PromptPay. Others followed. However account to account (A2A) near real time payments stayed with PCC. Mar 2017: Transfer service for corporates via the 13-digit corporate identification number/ taxpayer identification number commenced. Other services such as linking e-wallets, and crossbank bill payment were added in 2017 too. Apr 2018: The Payment Systems Act (PSA) came into effect aiming to unify existing payment laws and regulations and synchronize certain requirements with international standards as well as allow some flexibility to support or reg emergence of new payment system/service in the future. 2019: Promotion of cross-border payment systems connectivity through QR payments with Singapore, Lao PDR, and Japan. In March 2019, based on a commercial decision of the banks, BOT's recommended tiered pricing was abandoned by a 'no fee campaign' - i.e. the cancellation of fees for consumer funds transfers below Baht 5,000 - resulting in increasing adoption of these services.

2018: Request to pay service was added &

Development and Promotion of Interoperable QR Payments for Domestic and

International Payments. At the end of 2018, there were more than 3 million e-Payment acceptance points with the Thai QR Payment functionality available in stores, online, and at various public transportation systems such as public buses and the Banakok

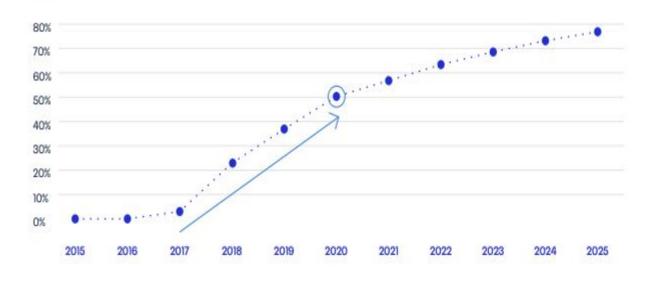
PromptPay linked to Singapore's PayNow launched the first linkage of Real-time Payment Systems to facilitate interoperable instant cross border transactions.

2021: PromptPay has <u>35 members</u>, 29 which are banks (versus <u>21</u> <u>banks</u> on 27 January 2017).



PromptPay: Outcomes

Real-Time Payments Volume and Its Share in Overall Non-Paper Based Transactions, 2015-25f



Transactions



Share of Volumes by Payments Instrument



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Economist Intelligence Unit (EIU), 2020, Global Microscope 2020: The role of financial inclusion in the Covid-19 response, from https://content.centerforfinancialinclusion.org/wp-content/uploads/sites/2/2020/11/EIU Microscope 2020 161120.pdf

BOT, 2006, Payment Systems Report, from https://www.bot.or.th/english/paymentsystems/publication/ps_annually_report/documents/payment_2006_e.pdf

BOT, 2021, Payment Systems Annual Report, from https://www.bot.or.th/English/PaymentSystems/Publication/PS Annually Report/Pages/default.aspx

Vocalink, 2020, The real-time payment market continues to mature, from https://www.vocalink.com/news-insights/stories/real-time-payments-market-continues-to-mature/

BOT, 2015, Payment Systems Report, from https://www.bot.or.th/English/PaymentSystems/Publication/PS_Annually_Report/Documents/Payment_2015_E.pdf

ITMX, Our history, from https://www.itmx.co.th/home/our-history/

Monetary Authority of Singapore, 2021, Singapore and Thailand Launch World's First Linkage of Real-time Payment Systems, from https://www.mas.gov.sg/news/media-releases/2021/singapore-and-thailand-launch-worlds-first-linkage-of-real-time-payment-systems

BOT, 2021, Joint Press Release The Launch of the Interoperable QR Payment Linkage between Vietnam and Thailand, from https://www.bot.or.th/English/AboutBOT/Activities/Pages/JointPress_26032021.aspx

Vocalink, 2020, PromptPay - Transforming Thailand towards a digital economy, from https://www.vocalink.com/news-insights/case-studies/case-study-thailand-promptpay/

ITMX, PromptPay Journey, from https://www.itmx.co.th/home/

Vocalink, 2019, PromptPay – two years of transforming Thai payments, from https://www.vocalink.com/news-insights/stories/promptpay-two-years/

UOB, 2020, Service Charges – Domestic Money Transactions, from https://www.uob.co.th/web-resources/pdf/personal/announcement/11bankfee/2020/30-35/31/31-07Apr2020 en.pdf?TRILIBIS EMULATOR UA=Mozilla%252F5.0+%2528Windows+NT +6.1%253B+WOW64%253B+rv%253A26.0%2529+Gecko%252F20100101+Firefox%252F26.0

ITMX, Management Policy and Corporate Governance, from https://www.itmx.co.th/home/charter-policy/

Pariwat, S. & Hataiseree, R., 2006, Strategy and system to facilitate e-payment services (ITMX): Thailand's recent experiences and the role of central bank, from https://content.botlc.or.th/mm-info/BOTCollection/BOTWP/wp022006.pdf

BOT, 2017, Payment Systems Report, from https://www.bot.or.th/English/PaymentSystems/Publication/PS Annually Report/Documents/Payment 2017 E.pdf

ITMX, API Hub, from https://www.itmx.co.th/home/api-hub/



Acknowledgement: Interviewed Country Stakeholders



Acknowledgements to Canada stakeholders:

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Regulator				
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Confidential	Director of Reserves Management	Department of Finance Canada		
Confidential	Economist	Department of Finance Canada		
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Dr Brad Pragnell	Financial Services Expert	Independent		
Other Ecosystem Players				
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Acknowledgements to Ghana stakeholders:

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Acknowledgements to Philippines stakeholders:





Acknowledgements to Thailand Stakeholders:

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