



E-payment system

Industry focus

March 2019

KPMG in Thailand

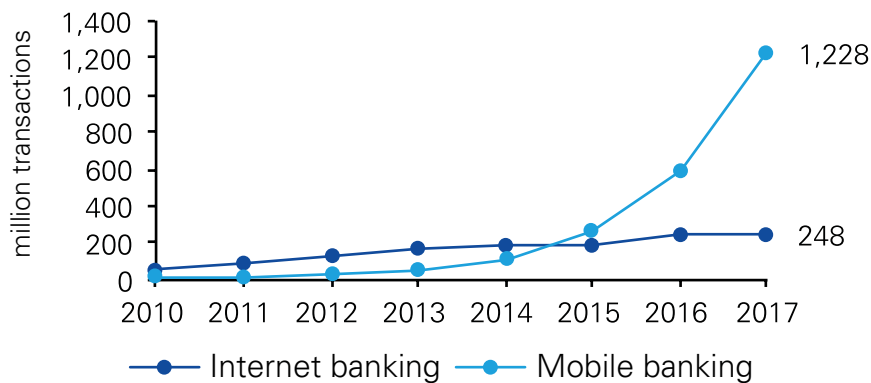
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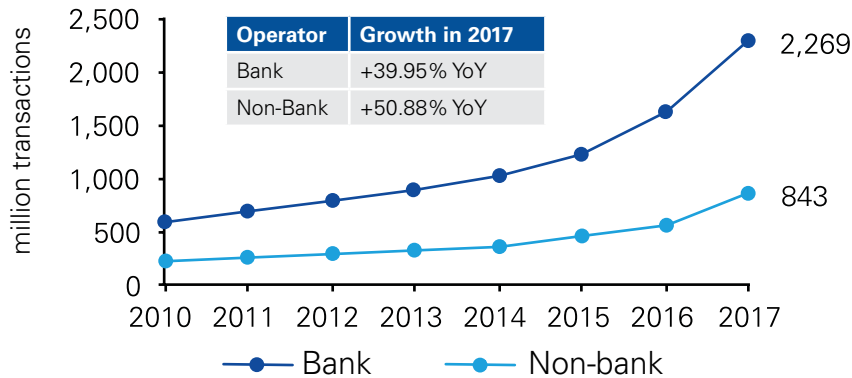
E-payment system

Following the 'National e-Payment Master Plan' which started in 2017 and the growth of e-commerce, the government and the private sector has encouraged the use of e-payments, including PromptPay, Electronic Data Capture (EDC) machine and Quick Response (QR Code). While large banks are updating their mobile applications to enable e-payments, non-banks are also heavily promoting their services to draw in more e-Wallet users, especially telecom operators who can communicate directly and easily with their customers using their own wallet, via their own telephone network.

Volume of mobile banking and internet banking

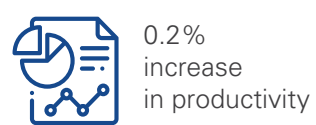
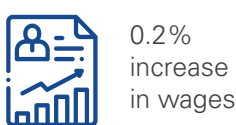
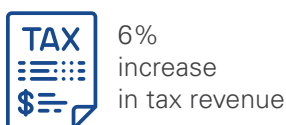
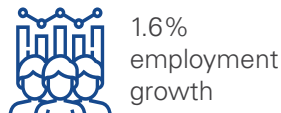


Volume of e-payment



Source: KPMG analysis, Bank of Thailand, SCB EIC Analysis: Why e -Payment is essential to merchants as Thailand becomes a cashless society? (2017)

Estimated benefits for Bangkok from 2017 to 2032 of e-payment system¹

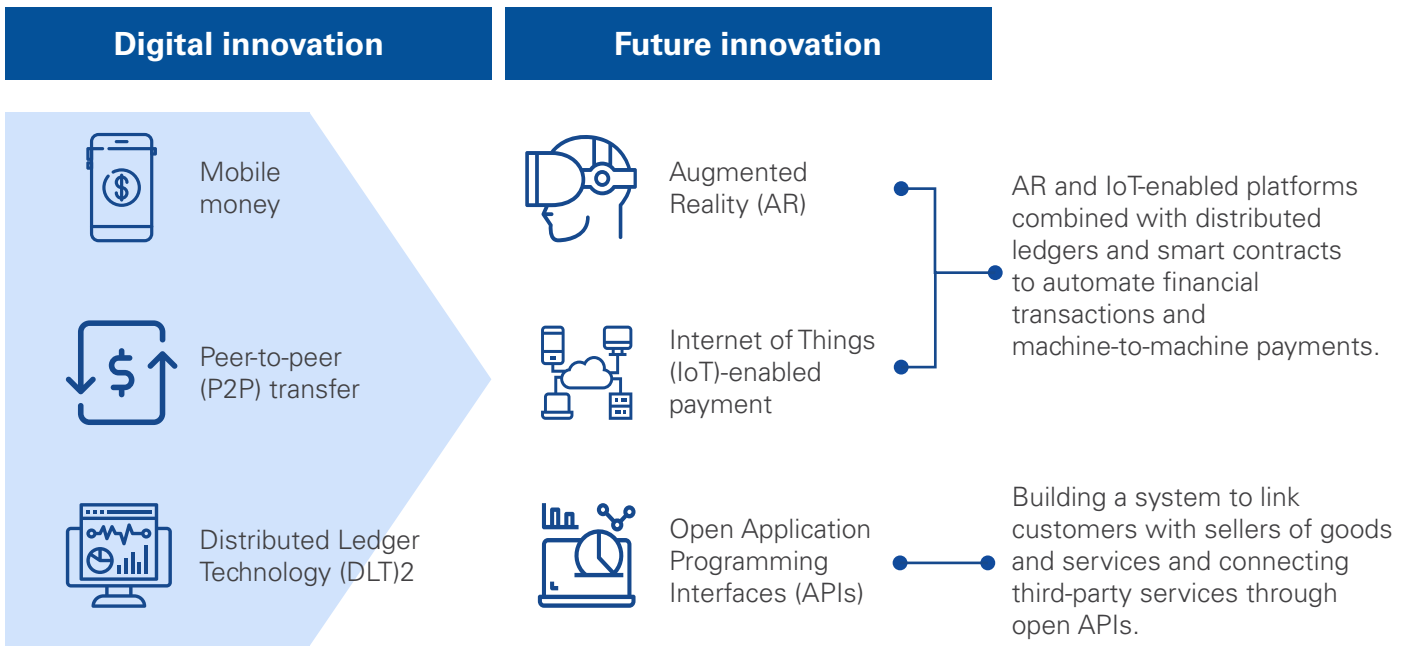


Source: Cashless Cities Report by VISA (2017)

¹ In the case that all stakeholders start transacting in the same amount as the top 10% of its users



Future of e-payment systems



Due to insufficient ability of banks to meet customer demands, these innovations will enable non-banks to provide financial services.

The combination of current and future innovations will empower non-banks to provide real-time payment, even without the involvement of financial institutions.

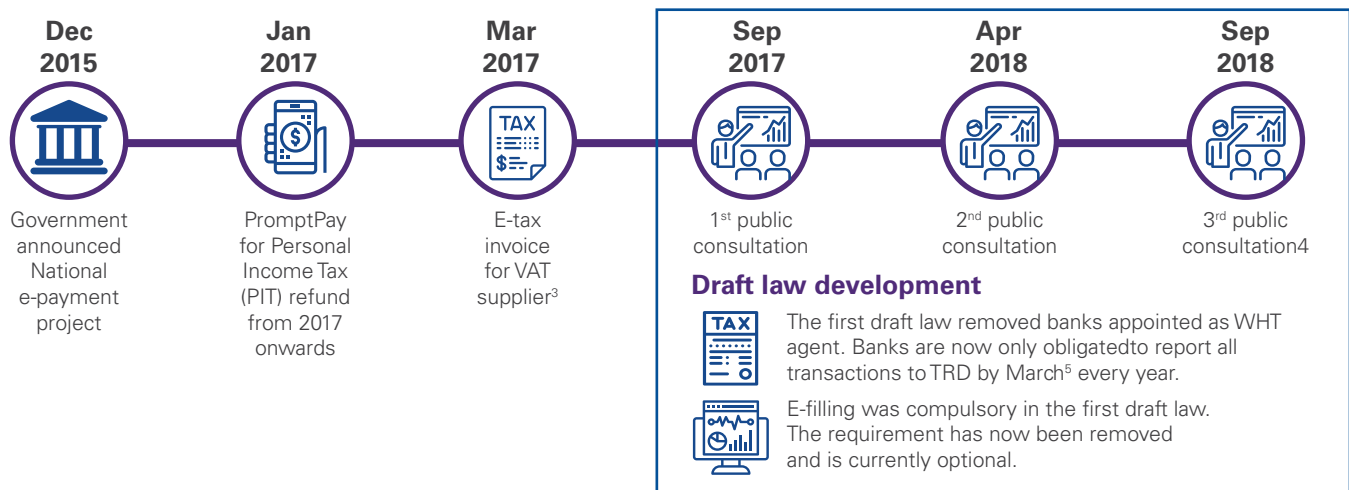
Source: Krungsri Research Intelligence: Future Payment Systems (2018)
² money transfers using 'smart contracts' that record contractual agreements



Siraporn Chulasatpakdy
 Partner, Advisory
 KPMG in Thailand

“We have seen significant changes in e-payment systems that are geared towards innovations that help reduce costs, increase efficiency, connect to partner ecosystems, and increase security of payments. Large numbers of non-banks operating in technology-related areas, including telcos, startup businesses and over-the-top (OTT) operators, are transforming customers’ lives through digitalization. With technology know-how and a large client database, telcos have great potential to transform their e-payment system to provide better customer experience, using digital marketplace ecosystems as integrators for devices, applications, methods of mobile payment with secured customer identity management. This will support telcos to rapidly build demand for e-payment transactions via digital marketplace ecosystem and seize the opportunities that traditional banks are less able to utilize.”

Volume of mobile banking and internet banking



Type	Now	Future
E-tax invoice	By payers	By payers
Withholding tax	Paper-based	Email-based, web portal is optional
E-filing	E-filing is optional with no e-cash tax payment mechanism	E-filing is optional with e-tax cash payment mechanism

Source: TRD's and National e-payment websites
³ VAT suppliers can issue an e-tax invoice as an option (per TRD internal regulation dated 1 March 2017)
⁴ There is no change between the 2nd and 3rd draft.
⁵ In the third draft, the first report is to be submitted by March 2020 (for the tax year of 2019)

Key challenges and solutions

1. Security and compliance	2. Technology and data silos	3. People/process misalignment	4. Business silos	5. Strategy misalignment
<ul style="list-style-type: none"> Regulatory requirements/compliance Concerns around data security and privacy 	<ul style="list-style-type: none"> Difficulty sharing customer data and analytics between channels, countries or locations Inadequate digital infrastructure 	<ul style="list-style-type: none"> Lack of qualified staff Misperception that costs of accepting e-payment are higher than cash Cultural attachment to cash 	<ul style="list-style-type: none"> Supply chain is not configured to meet the commitments made by the channels at pre- or point-of-sales 	<ul style="list-style-type: none"> Limited accessibility to digital payment products
<ul style="list-style-type: none"> Multi-factor authentication, biometrics, device and IP authentication such as Know Your Customer (KYC) Advanced real-time fraud prevention including artificial intelligence, machine learning systems 	<ul style="list-style-type: none"> Open APIs between business processes, back-end services and data Industry collaboration between financial institutions, regulators and law enforcement agencies 	<ul style="list-style-type: none"> In-house training programs Use of machinery and technology Company's own schools Partner with vocational institutes/universities 	<ul style="list-style-type: none"> New omni approach to support customer and maintain the overlay architecture Agile development strategies as well as cloud and as-a-service models 	<ul style="list-style-type: none"> Tailor digital products to meet distinct customer needs Develop solutions that would support acceptance and usage of low-value digital transactions

Source: KPMG Publication – [New payments platform](#) (2018), [Moving beyond omnichannel: Telcos need to evolve rapidly to achieve success](#) (2017), [Cashless Cities Report](#) by VISA (2017), SCB EIC Analysis



Tatiana Bespalova
Partner, Tax & Legal
KPMG in Thailand

“E-Tax scheme, one of the four modules under the National e-Payment Master Plan, encompasses an integrated IT system and taxation regulations to facilitate e-payments, e-tax invoices, e-tax withholding and e-filing with the objective to create an efficient tax collection system. The government has introduced initial rules and regulations to enable electronic submission of tax documents, including e-tax invoices and e-receipts. Certain tax filings can also be done electronically. The ultimate aim of the government is to administer all types of taxes electronically which would certainly be a welcome development.”

Comparison features between e-payment instruments in Thailand

Players	Examples	Large client database	Cybersecurity prevention measures	Other financial services	Digital ventures for startups	Customer loyalty program	One-day returns for unmatched transfers	All-free services
Banks	<ul style="list-style-type: none"> SCB Easy Pay K PLUS 	✓	✓ ⁶	✓	✓	✓	✓	✓
Telco	<ul style="list-style-type: none"> AIS mPAY TrueMoney 	✓	✓ ⁷	Banking agent	✓	✓		
FinTech	<ul style="list-style-type: none"> Rabbit LINE Pay Alipay 	✓	✓		✓	✓		
Mobile device operators	<ul style="list-style-type: none"> Apple Pay Samsung Pay 	✓	✓		✓	✓		
Retailers	<ul style="list-style-type: none"> CenPay Starbucks 	✓	✓	Banking agent		✓		

Source: Government Saving Bank Research, Bangkok Post, Money Channel, Company Data (as of October 2018)

⁶ The central bank instructed all banks to make cybersecurity a priority, develop systems to tackle unauthorized access and offer compensation in the event of financial losses from a data breach. According to the central bank's announcement, any financial institution must also have at least one board member that specializes in IT.

⁷ The central bank developed the Guiding Principles for Trusted Mobile Payments to ensure that mobile payment service providers have risk management processes that cover information technology security risk, cyber risk, and operational risk.

Key factors which drive businesses to accept e-payment instruments



Sales increase by up to 17-22% after adding e-payment option as it serves demands of consumers that do not have enough cash on hand



Significant cost savings, less time and effort required on cash management



Tense market competition between service providers to attract consumers brings both benefits and pressure to businesses

Source: SCB EIC Analysis, Peuy Ungphakorn Institute for Economic Research - The Journey to Less-Cash Society: Thailand's Payment System at a Crossroads (2018)



Thanit Osathalert
Partner, Audit
Head of Consumer & Retail
KPMG in Thailand

“Consumer demand, security, and speed of settlements are critical to business. Businesses are challenged to meet consumer demand while maintaining low cost, unifying payments and high levels of security. Telcos are a typical example of how the involvement in retail payment services have a significant impact on expanding financial payment services to unbanked people. 7-Eleven uses True Money wallet as the e-payment system in its convenience stores, from which they recently received a license to become banking agent. Banking agents are allowed to provide financial transactions such as money deposits, transfers, withdrawals and payment. Moreover, they can also offer a competitive price if the services complements their existing businesses.”



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