

# FinTech: Legal Issues, Risks, and Approaches for Development

핀테크: ความเสี่ยง ประเด็นด้านกฎหมาย และแนวทางการพัฒนา

Nattawut Hantrakul  
นัฐวุฒิ ฮันทรกุล

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## Abstract

At present, financial technology or FinTech has been advanced tremendously with potential capability to develop financial innovations for competition in the free market. In addition, FinTech will definitely and quickly reduce the transactional processes, which will push forward the global-level competitiveness of digital economy of Thailand. Hence, Thailand should welcome the emergence of financial innovations by initiating flexible laws and regulations to accommodate innovative business models. As a result, every sector can change, adjust, and overcome any obstacles, while enhancing people to get access to financial services on a stable and safe manner. However, one of the major obstacles to efficiently implement and develop financial technology in Thailand concerns the law irrelevant to modern technology, hence inhibiting access to financial services among entrepreneurs and the general public, resulting in the increase of unnecessary economic costs.

**Keywords:** *Financial Innovation, Risks, Legal Issues, Regulations, FinTech Development*

## บทคัดย่อ

ในปัจจุบันเทคโนโลยีทางการเงิน หรือฟินเทค มีการต่อยอดเพื่อเพิ่มขีดความสามารถในการพัฒนานวัตกรรมทางการเงิน เพื่อแข่งขันในตลาดโลกเสรี นอกจากนี้ เทคโนโลยีทางการเงินสามารถลดกระบวนการขั้นตอนของธุรกรรมทางการเงินให้ใช้ระยะเวลาสั้นและรวดเร็วยิ่งขึ้น ซึ่งช่วยส่งเสริมเศรษฐกิจดิจิทัลในยุคปัจจุบันของไทย ให้แข่งขันในตลาดโลกได้อย่างเท่าเทียม ฉะนั้น ประเทศไทยจึงควรเปิดรับการเข้ามาของเทคโนโลยีทางการเงินใหม่ๆ ซึ่งรวมถึงกฎหมายและกฎระเบียบต่างๆ ให้สอดคล้องกับนวัตกรรมและโมเดลธุรกิจใหม่ๆ เพื่อให้ทุกธุรกิจสามารถปรับตัวเปลี่ยนแปลงและก้าวข้ามข้อจำกัดต่างๆ และเพื่อให้ประชาชน

Faculty of Business Administration, Ramkhamhaeng University  
คณะบริหารธุรกิจ มหาวิทยาลัยรามคำแหง  
E-mail: hnattawut@hotmail.com

ทุกคนสามารถเข้าถึงข้อมูลและบริการทางการเงินอย่างมีประสิทธิภาพและปลอดภัยมากยิ่งขึ้น อย่างไรก็ตาม อุปสรรคที่สำคัญของการนำฟินเทค มาใช้ในประเทศไทยคือกฎหมายและข้อบังคับต่างๆ ซึ่งไม่สอดคล้องกับสภาพธุรกิจในยุคปัจจุบัน ที่เน้นความสะดวกในการเข้าถึงบริการทางการเงินของผู้ประกอบการและประชาชนทั่วไป ซึ่งอุปสรรคเหล่านี้ยังทำให้ต้นทุนทางธุรกิจสูงขึ้นโดยไม่จำเป็น

**คำสำคัญ:** นวัตกรรมด้านการเงิน ความเสี่ยง ประเด็นด้านกฎหมาย การกำกับดูแล การพัฒนาฟินเทค

## Introduction

One of the problems in financial efficiency and financial stability stems basically from too rigid regulations initiated by the government, and that may amplify the financial costs and risks. In the past decades, financial technology or “FinTech” has been used as a financial innovation to reduce business costs which in turn leads to increasing efficiency of financial transactions. To increase business’s competitive potential and flexibility, the future financial business should focus on providing convenient access to financial services among entrepreneurs and consumers, together with simple service procedures and the shortest time and lowest costs. However, the current implementation of FinTech has not yet been supported by standardized laws and regulations readily acceptable by all business sectors. This is due to the lack of factors conducive to the emergence of proper FinTech ecosystem of Thailand required for FinTech development. The said ecosystem consists of financial institutes, FinTech business, and regulatory organizations.

Oxford Dictionary defined “FinTech” or Financial Technology as computer programs and technology used to support or generate banking or financial services (Ancrì, 2016). World Economic Forum (WEF) (2015); Blake, Vanham, and Hughes (2016) defined FinTech broadly as involving innovations and the use of technology in designing and presenting financial services and products. FinTech has been used in various sectors of financial business, e.g. payment of goods & services, investment, and lending. Moreover, most FinTech

firms have employed smartphone technology, big data, and innovative data analysis in financial design to fit various groups of customers. Hence, FinTech has been the key factor in current business practices, in which those data will be used to extensively increase competitive advantage and access channel to information among business and customers. This has basically been a new phenomenon in terms of modern business practices in recent years.

In a broad meaning, FinTech covers innovation and using technology in designing and offering financial products and services, and it has been currently used in almost all aspects of financial transactions, including loan, consulting, investment management, and payments. Some countries in Europe are presently almost 100% cashless; e-payment is also used all over the country even in a small roadside coffee shop, not just in urban or business center. Therefore, tourists have to learn how to use e-Payment and e-Wallet for convenient travelling in that particular country.

However, Thailand has not yet reached that stage. One major obstacle of many countries to use e-Payment concerns the money supply that is out of the economic system. That is, Thai people are still used to cash payments despite the increase of online selling & buying. The aforesaid incident stems basically from their limited access to digital financial system, lack of trust in e-Payment, and most importantly, perceived insecurity in current financial transactions.

This paper, therefore, aims to explain the state of FinTech industry in Thailand and to describe of factors that are constraining FinTech from realizing potential such as risk, regulation and approaches for development.

## FinTech and legal issues

FinTech is the business in which innovative financial services and operations are offered to customers. Therefore, a new set of rules and regulations are needed to support the current and future financial transactions and services. Hence, it is commonly agreed among all parties concerned to initiate a conclusive set of rules and regulations for FinTech business to be congruent with current practices in the modern business world. This will help the business overcome possible obstacles and reduce related time and costs in e-Transactions. As a result, information access and use of technology among digital-era entrepreneurs will enhance technology development and implementation to generate efficient and practical financial transactions.

The Law on Business Promotion and Public Access to Services through Financial Technology (FinTech Act) has been released to supervise over both money market and capital market, in which the types of financial service providers have been stipulated as following (Krungsri Finnovate Company Limited, 2017):

1. Financial institutes
2. Entrepreneurs under supervision of The Securities and Exchange Commission, Thailand
3. Entrepreneurs of life and non-life insurance business
4. Entrepreneurs of e-payment business
5. Authorized agent of regulatory sandbox
6. Other agents as stipulated by the commissions

FinTech Act covers the following issues:

1. To generate confidence that the electronic transactions will be recognized by law in the same manner as traditional transactions. The said e-Transactions include:

- 1) business-related transactions of financial institutes
- 2) business-related transactions of state financial institutes
- 3) business-related transactions as stipulated in Payment Systems Act
- 4) business-related transactions as supervised by the Securities and Exchange Commission, the Capital Market of Supervisory Board, or the Office of the Securities and Exchange Commission
- 5) business-related transactions of insurance firms
- 6) transactions related to securities
- 7) a proxy voting of securities holders
- 8) meeting and voting of shareholders
- 9) other financial and investment transactions as announced by the commissions

2. To facilitate the FinTech business to get access to information controlled by the government agencies, so that it can be used for KYC (Know Your Customer) and CDD (Customer Due Diligence)

3. To approve that a customers' electronic authentication is as valid as his/her face-to-face presence

4. To facilitate the FinTech business in getting access to the classified information of government agencies to be used in developing financial transaction technology, and to support the revelation of classified information conducted on the voluntary basis of both the government and private sectors.

The details are as following:

- 1) The governmental units or the information owners may collect fees from the financial service providers or information applicants as deemed appropriate,
- 2) In case of any violation to the classified information, the information owner may appeal to court for suspending or abstaining the said deed, or file a lawsuit to stop privacy violation and claim for compensation,
- 3) The violation of personal information privacy is subject to 3-year imprisonment, or fine not over 500,000 baht, or both

The aforementioned legal issues have formulated to some extent obstacles to current financial transactions. Although FinTech trend is relatively new and public awareness is still low, financial technology by itself has been included in Thai people's daily life in various forms, e.g. ATM, credit card, and online trading.

## Risks of FinTech

Despite its various levels of meaning, FinTech can be categorized into the following three levels of significance.

At the first level, FinTech has provided convenience due to increasing information and time for people, leading thus to their better decisions regarding financial transactions.

At the second level, FinTech has shortened global distances hence facilitating international financial transactions. Security is therefore a major concern, and the users of FinTech have to understand a diversity of cultures and measures on information safety implemented in each participating country.

At the third level, cyber safety is a major concern for every party, since, along with convenience and cost-saving, some groups may find it easy to steal personal information for their own advantage. Hence, extreme caution on information safety must be strictly exercised.

Moreover, FinTech is not a solution to all fundamental problems of business. That is, FinTech may help wipe away some particular risks, allow open access to financial services for Startups, generate business credibility and identity, and facilitate business-to-business transactions.

The impacts of FinTech on financial stability stems basically from the use of big data and distributed ledger technology (DLT). That is, although FinTech increases efficiency in resource allocation and risk management, it does not change the risk components, but instead solidify them due to the increasingly complex risks of business stems and cycles.

Information technology via the Internet helps improve the efficiency of resource allocation and risk management, but it requires stable data accuracy, and efficient analytics of information and financial resources. In this aspect, such allocation is a double-edged sword. That is, while using big data as financial resources opens a risk to FinTech system, it nevertheless provides breadth and depth regarding financial decisions, and risk management of this sort helps solve problems of information imbalance, increase ability in making credit decisions, as well as strengthen efficiency in capital allocation, risk cost determination, and mechanism in risk management.

Moreover, FinTech also benefits the asset allocation of market players, since the variation between risk and risk integration helps reduce the risks of the ecosystem (De Nederlandsche Bank, 2016) with more data referring to more risks. However, the current marketplace lending or Peer-to-Peer

lending (P2P) is an efficient form to detach risks out of big data (Chunhachinda, 2017). According to the United States Department of the Treasury, Peer-to-Peer lending (P2P) has been rising tremendously. However, data inaccuracy is still a major credit factor in peer-to-peer network.

Since FinTech contributed to higher IT and operational risk, it caused no change regarding the risk characteristics of financial services. In this aspect, FinTech concerns mostly the innovative application of internet-oriented information technology in financial industry, and that affects no attributes of traditional risks and types of financial services.

The first type of risks concerns liquidity and interest rate. These traditional risks become more complicated and inherent due to the elaborated structures of FinTech business and information technology applied in FinTech services, e.g. P2P lending, internet payment, and other platforms.

Another risk stems basically from internet communication networks and innovative information technology, contributing to distinctive cyber and operational risks. This type of risks include, for example, network maintenance, technical management and bugs, management errors, and human errors, which may paralyze the whole business system and disrupt the normal operation of an organization. Recent studies revealed that cybercrimes have been reported in the high levels, one of which occurred in 2014 whereby millions of JP Morgan accounts were stolen due to security failure of information technology.

Since FinTech originally involves big data analytics, it entails two types of risks—one arising out of the operational costs to get access to those data, and the other the inconclusive data analysis that might lead to improper business decision making. A research conducted by the U.S. Department of Treasury (2016) indicated a risk of peer-to-peer network lending was caused by incomplete and inaccurate data collection of credit cycles from existing big data and algorithm.

The impacts of FinTech on the ecosystem are multifaceted, covering network system, economy of scales, and efficiency. The said impacts will inevitably contribute to the risks of complicated cross-market and cross-regional contacts and expansion, contributing thus to restricted controllability of information distribution.

One of the risks concerns the lending through peer-to-peer network, in which the economic recession may lead to monetary fluctuations that renders higher risks in the system. Furthermore, there also exists a technical risk stemming from digital technology access and use, e.g. program hacking and interferences. Since FinTech is largely involved with the financial internet, the development of internet data and technology will help increasingly reduce transaction costs, uplift service efficiency, and extend service provision for a wider financial coverage.

## **Approaches for FinTech development**

To develop FinTech in Thailand, the concerned parties need to take the following issues into consideration:

### **Regulatory actions of FinTech by other countries**

The investment on FinTech has been growing tremendously, especially in the United States, China, and England. In Thailand, however, despite the implementation of FinTech to increase financial service efficiency and reduce related costs, proper rules and regulations are still missing in handling newly emerging relevant risks of FinTech. In this aspect to help generate self-preparedness among Thai entrepreneurs, the government sector has contributed largely to the growth of FinTech business by offering a regulatory sandbox for business try-out, and the outcome of which is the business being responsive to the customers' needs. (KPMG, 2017)

**Table 1** Comparative growth of FinTech business: China, USA, and England

Comparative growth of FinTech business			
Components	China	USA	England
1. Demand	Unmet demand in rural areas, e.g. access to credits, when compared with total population	Equal access across the population	Potential of access to the EU market
2. Personnel & funds	Concentration of bank branches in specific areas, with inadequacy for the large population and vast areas. Hence, peer-to-peer lending via online, has expanded speedily.	Availability of both funds and talents in technology, IT, and Startups, hence leading fast to innovation development.	Accelerator or meeting forum established between service providers and FinTech firms to generate ecosystem solutions. Financial institutes are promoted to provide credits for SMEs via “Application Programming Interface (API)” so that Startups have equal opportunities to propose their innovative products.
3. Laws and regulations	No existing regulatory actions, leading to high risks in financial transactions. The government later enacted a related law to regulate FinTech more efficiently.	Different types of rules and regulatory firms are set up to supervise transactions and financial institutes at the state and federal levels.	Innovation hubs are established to provide knowledge and guidelines about business opening and permit application.

**Source:** Summarized by author.

### **International experiences of FinTech supervision**

The dramatic increase of technology caused by speedy and comprehensive communication networks has enabled people to get all-time access to various services via a number of applications. The service providers, therefore, have initiated more innovative services to investors, particularly in the financial and investment sectors. Since the said services are intangible, these sectors involve the low-cost business, thus attracting the Startups tremendously. Although the Startups are more flexible and creative than the original entrepreneurs in financial and investment industry, they are estranged to existing rules and regulations, and additionally deprived of funds and customer base.

In other countries, FinTech investors compete intensively to attract Startups and talents. However, the inconsistent regulatory measure is still the key concern among FinTech entrepreneurs. Therefore, environmental factors relating to FinTech should be made available to generate the sustainable development of Thai FinTech.

### **Information disclosure and protection of consumer rights**

Due to the increasingly advancing technology of data storage and processing system, highly efficient but cheaper personal computers and smartphones have rendered those data readily available for most consumers. In addition, the expansion of information technology infrastructures regarding area coverage and service quality has enabled the faster-than-ever internet usage, communication, and information dissemination.

According to Chen, Chiang, and Storey (2012), transactions of product and service trading contributed to a big chunk of database can be processed, analyzed, and later used in making decision by both the government and private sectors. Those data include, for example, general information of Thai citizens and analysis of customers' demand and satisfaction. In this aspect, the most critical issues in using the big data is the violation of personal privacy.

### **Future regulations of FinTech**

Thai Fintech Association was established in 2016 to support and develop the FinTech industry of Thailand. Three goals were stated as follows:

1. To be the national center for testing and developing FinTech
2. To be the center in creating Thai FinTech ecosystem
3. To be the center in formulating the national FinTech Plan.

The trend of FinTech together with the Thailand 4.0 policy had tremendously agitated the whole financial industry. However, very few FinTech businesses have reportedly taken place when relatively compared with Thailand's economic growth. Actually, the growing trend of FinTech was unsurprisingly restricted due to a number of legal challenges as following (Techsauce Team, 2017):

1. Despite the issuance of Digital Signature Law (in accordance with the Electronic transactions Act, B.E. 2544 (2001)), Thai court has not yet recognized the digital signature as legal binding. Otherwise, it will help improve operational efficiency, reduce costs, curb on possible corruptions, and eventually lead Thailand to the digital economy.

2. Delay in issuing the P2P lending law and unavailability of distinctive operational approach: Bank of Thailand opened for a hearing about P2P lending on September 20, 2016, and very little progress has occurred ever since. Players in the industry still have vague idea concerning the issuance of P2P lending permit. Meanwhile, other AEC countries such as Singapore, Indonesia, and Malaysia have been more advanced than Thailand by issuing the P2P lending regulations in 2016, whereby over 10 permissible platforms are in effect.

**Table 2** Comparison of FinTech-related practices implemented by SCB and KBank

Siam Commercial Bank (SCB)	Kasikornbank (KBank)
<p>- Digital ventures was established before 2016, by separating from the Corporate Venture Capital, with investments in Startups and direct funds.</p> <p>- Most investments are on international firms, so that related technology can be used with the Ripple Startup, the bank-owned business that offers solutions for fund transfer on Blockchain as following:</p> <ul style="list-style-type: none"> <li>• Pulse iD Startup, a Hong-Kong based firm in information provision, developing a platform to analyze individual tracks to identify customers' identity.</li> <li>• Paykey, a platform for payment on smartphone keyboards to help customers transfer funds via social network.</li> <li>• IndoorAtlas, a developer of technology to pinpoint Indoor Positioning System (IPS). SCB used this technology to develop Chatuchak Guide Application, or a digital platform to create the online storefront for the shops in Chatuchak market.</li> </ul>	<p>- KBank established KBTG in 2016 to perform as a lab for innovation development, with the Beacon Venture Capital as the investing unit, and also joined by KVision, a venture capital to generate interesting deals from overseas.</p> <p>- KBTG is comprised of 5 affiliated firms as follows:</p> <ol style="list-style-type: none"> <li>1. Kasikorn Technology Group Secretariat, focusing on planning and monitoring the performances of other KBTG firms, supporting financial and personnel management and cooperating the work alignment between the KBTG group firms and KBank.</li> <li>2. Kasikorn Labs, focusing on research and development of innovative technology and business practices that will be beneficial for the digital banking system and the digital economy, as well as formulating and try-out the prototype before implementing it in KBank products.</li> <li>3. Kasikorn Soft, focusing on designing and creating the information technology to support business requirements of KBank and the innovation implementation in KBank in a fastest and highest efficiency manner.</li> <li>4. Kasikorn Pro, focusing on managing of infrastructures and IT systems in both the newly-created and the modified sections, maintaining and updating the bank infrastructures for all-time efficiency.</li> <li>5. Kasikorn Service, focusing on supporting the performances of the KBTG group firms, in both IT development, testing, and system operation.</li> </ol>

Source: Adapted from Mimeo (2018)



### FinTech and increase of financial efficiency

At present, FinTech has been used to curb down the competitiveness among commercial banks. Throughout the recent years, both small and large commercial banks in Thailand have admittedly adjusted themselves to handle the emergence of FinTech. This endeavor aims not only at increasing efficiency, but also at responding to customers' demands. The following table illustrated the practices of two big commercial banks of Thailand, Siam Commercial Bank (SCB) and Kasikornbank (KBank).

The aforementioned system improvements as performed by SCB and KBank signified to a certain extent the significance of risk analysis and assessment of policy and existing regulations. As a result, a national organization has to be founded to regulate the FinTech business in Thailand, as well as the development of technology, financial innovations, and risks from technological changes. Laws and regulations should be reenacted, and counseling services be provided for Thai commercial banks and new coming FinTech business. The government

section, therefore, should employ communication tools to generate understandings about proper regulations to delimit the relevant financial tools to be used more efficiently by FinTech-related business.

### Conclusion

FinTech is the innovative financial technology that has been used extensively in several countries to uplift competitiveness, and analyze and assess risks on the basis of regulatory principles. For the betterment of FinTech, rules & regulations, as well as relevant laws should be improved. However, a core agency to drive FinTech business is still missing in Thailand, so as to drive the mechanism relating to the FinTech ecosystem to provide necessary information for financial institutes and FinTech business. Other obstacles include the public's lack of trust in technology safety in e-Transactions, their preference of cash payment, and the appropriate level of information disclosure. To conclude, Thailand should produce more talents to be responsive to market demands, and allow international experts to work in FinTech business. ♦

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