

Development, Risk and Legal Aspect of Fintech, Insurtech and Proptech in Indonesia

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Abstract

In recent years, the development of financial technology sectors in Indonesia has garnered significant attention and influences how individuals access financial services. Therefore, there is a need for an understanding of the development, risks, and legal framework of the fintech industry. This study aims to describe developments, risks, and legal aspects of financial, Insurance and Property Technology. This study uses a descriptive analysis method and library research by collecting secondary data from articles, news and official websites to delineate the trends, risks and legal aspects of Financial, Insurance and Property Technology. The results of the study show that these three sectors have experienced significant developments in recent years. However, there are also risks such as data security risk, credit risk and legal compliance risk. Therefore, companies in the fintech, insurtech and proptech sectors need to strengthen their security and risk management systems. In the legal aspect, shows that regulations and policies in Indonesia are still quite limited and have not fully supported the development of these sectors. However, the Indonesian government has started to pay attention to this needs to develop a more comprehensive regulatory framework for these sectors. Therefore, companies need to pay attention to ensure their law's compliance.

Keywords : *Fintech, Insurtech, Proptech*

1. Introduction

The development of technology and the internet has brought about major changes in various sectors, including the financial, insurance and property sectors. This phenomenon is known as fintech, insurtech, and proptech. Fintech, insurtech and proptech have unique characteristics and great growth potential. Fintech provides financial services that are efficient, inexpensive and easily accessible to the public. Insurtech leverages technology to transform traditional insurance business models and provide more affordable and personalized solutions. Meanwhile, proptech utilizes technology to optimize property business operations, from development to marketing. (Abdi, A. M., & Dwiyanto, A. (2020), Abdullah, F., Widyastuti, T., & Salim, U. (2021), Angelina, D. P., & Widiastuti, E. (2020).

In Indonesia, fintech, insurtech and proptech have grown rapidly in recent years. Companies in these sectors offer new innovations and services that enable consumers to access financial, insurance and property products and services more easily and inexpensively. However, along with rapid development, these sectors also face certain risks and challenges. One of the main risks faced by fintech, insurtech and proptech companies in Indonesia is data security risk. In recent years, there has been an increase in cases of data breaches and leaks of personal information. In addition, companies in these sectors also face credit risk, where companies may face difficulties in obtaining financing due to their unique business characteristics. In addition to these risks, the fintech, insurtech and proptech sectors are governed by complex and constantly changing laws and regulations. These regulatory issues can affect a company's ability to operate and affect the growth of the sector as a whole. (Abdi, A. M., & Dwiyanto, A. (2020), Abdullah, F., Widyastuti, T., & Salim, U. (2021), Angelina, D. P., & Widiastuti, E. (2020).

Fintech, insurtech and proptech are terms used to describe innovations in technology affecting the finance, insurance and property sectors. Fintech, short for financial technology, refers to companies that use technology to optimize financial services, including payments, money transfers, investments, and lending. Fintech can also refer to financial applications or online platforms that allow users to manage their finances more efficiently. Examples of popular fintech in Indonesia are GoPay, OVO, and Jenius. Insurtech, short for insurance technology, refers to companies that use technology to optimize the insurance industry.

Insurtech offers insurance services that are more efficient, accessible and affordable. Insurtech is also leveraging technologies such as data analytics and artificial intelligence to determine risk and offer better prices. Examples of popular insurtechs in Indonesia are PasarPolis and Qoala (Mehta, R., & Mehta, N. (2017), Fithriyah, N., & Apriani, A. (2021). Proptech, which stands for property technology, refers to companies that use technology to optimize their property business. Proptech provides solutions for property developers, owners and tenants, from development and planning to marketing and property management. Popular examples of proptech in Indonesia are UrbanIndo and Rumah123. (Manapat, M. M., & Suwardi, R. (2021).

The following are some of the latest research studies and references on fintech, proptech, and insurtech: Cornerstone Advisors (2021) looks at the future of fintech and banking, including the impact of new technologies such as blockchain and artificial intelligence on the industry. The article also looks at the rise in digital native customers and how they are changing the way banks operate. In addition, the World Bank (2021) examines the impact of fintech on financial inclusion in Mexico. This article analyzes data from a survey of 2,000 households and finds that fintech is having a positive impact on financial inclusion in the country. KPMG (2021) explores the potential for insurtech disruption and how insurtechs are filling gaps in traditional insurance. The report also highlights the opportunities and challenges facing the insurance industry as a result of insurtech. In addition, Frost & Sullivan (2021) analyzes the trends, opportunities and challenges facing the insurance technology industry in the Asia-Pacific region. The report examines the impact of emerging technologies on the industry and regulatory environment in various countries in the region. Capgemini (2020) examines the global insurtech landscape and the impact of emerging technologies on this industry. The article also looks at the challenges facing the industry and growth opportunities.

Meta Prop (2021) explores the future of real estate and proptech's impact on the industry. The report examines emerging technologies such as virtual reality and blockchain and how they are changing the way real estate is bought, sold and managed. Additionally, Oxford Saïd Business School. Business School (2020) explores the future of real estate and the impact of proptech on the industry. The report analyzes emerging technologies such as artificial intelligence and blockchain and how they are changing the way real estate is bought, sold and managed.

This study aims to evaluate developments, risks, and legal aspects of fintech, insurtech, and proptech in Indonesia. This research is expected to provide better insight into these sectors and assist companies in these sectors in making more informed decisions.

2. Method

This research is a literature review research about financial technology, insurance technology and Property technology. According to Randolph (2009), a literature review provides a framework for new findings and previous findings to determine whether or not there is progress of the findings, a comprehensive study, and the results of interpreting the literature related to a particular topic, where it identifies questions according to the study, search and analyze relevant literature using a systematic approach. According to Nana Sudjana and Ibrahim in Wibowo (2023), descriptive research is an attempt to describe a phenomenon, event, or occurrence that happens at the present moment. In this type of research, the researcher aims to capture and portray the events and incidents of interest as they naturally unfold. This study uses a descriptive analysis method by collecting secondary data from news, official websites, latest research and also books that used for practitioners also managers of the Fintech, Insurtech and Proptech sectors.

The research employs a Literature Review method by evaluating literature related to the development of Fintech, Insurtech, and Proptech, and analyzing relevant case studies and previous research. Risk Analysis is conducted by identifying and analyzing potential operational, security, and compliance risks. Legal Analysis is carried out by identifying the legal framework governing Fintech, Insurtech, and Proptech in Indonesia. This research also using Library research. Library research, also known as literature review, is a series of activities related to the method of collecting bibliographic data (Dewi et.al , 2023). Data Processing and Analysis in this study are conducted descriptively by analyzing survey data to provide an

overview of the overall industry development and identifying the characteristics of the identified risks.

3. Results and Discussion

Fintech: The Development in Indonesia

Fintech in Indonesia has continued to experience significant growth in recent years. According to a report released by the Indonesian Fintech Association (Aftech) in 2021, the number of fintech companies in Indonesia increased from 353 in 2018 to 412 in 2020. Meanwhile, total fintech investment in Indonesia reached US\$ 3.6 billion in 2020, increased from US\$ 1.4 billion in the previous year. (Bank Indonesia. (2021)).

One of the factors accelerating the growth of fintech in Indonesia is the increasing penetration of smartphones and internet access. According to data from Kominfo in 2020, the number of internet users in Indonesia has reached 196.7 million people or around 72% of the total population. This provides a great opportunity for fintech companies to reach consumers online. (Ministry of Communication and Informatics. (2020)). Along with the development of smartphone penetration and internet access, the development of Fintech companies is quite significant during the period 2017 - 2021. Based on reports from United Overseas Bank (UOB), PwC, and the Singapore Fintech Association (SFA), the number of financial technology companies (fintech) in Indonesia continues to increase. increasing every year. This is in line with the rapid penetration of digital finance in the country. Indonesia was recorded as having 440 fintech companies in 2017. The number then increased by 32.5% to 583 companies a year later. The number of fintech companies increased again to 691 units in 2019 and 758 units in 2020. The figure rose another 3.56% to 785 fintech companies as of September 2021. Meanwhile, the number of fintech companies in Indonesia is the second largest in Southeast Asia. The first position is occupied by Singapore with 1,350 fintech companies. Malaysia is under Indonesia with 549 fintech companies. Meanwhile, the Philippines and Vietnam both have 268 fintech companies (<https://dataindonesia.id>, 2023).

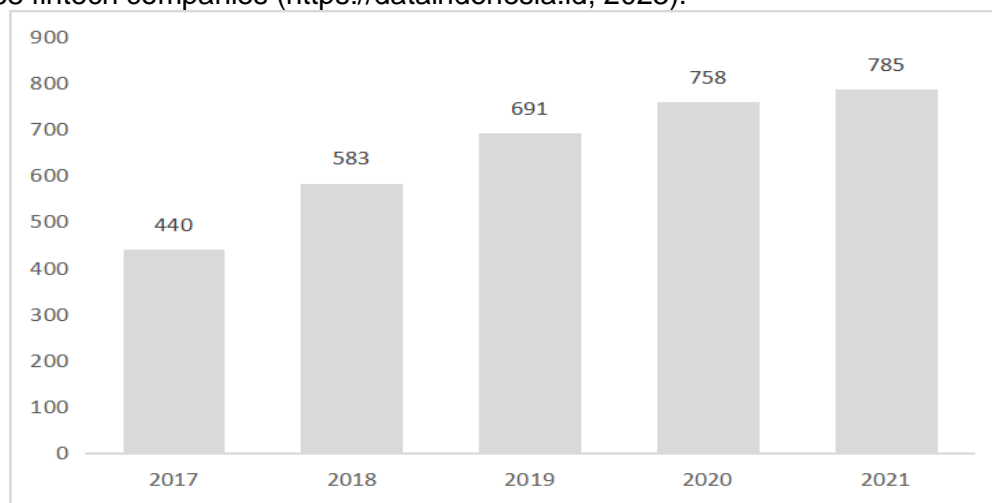


Figure 1. Development of Fintech Companies in Indonesia 2017 – 2021
Sources: UOB, PwC and SFA) as of September 2021*

In 2021, the most developed fintech sectors in Indonesia are e-wallets and peer-to-peer (P2P) lending. According to data from Bank Indonesia, the total value of e-wallet transactions reached IDR 412.3 trillion in the first quarter of 2021, an increase of 65.3% compared to the same period the previous year. Meanwhile, total P2P lending loans reached IDR 5.5 trillion in February 2021, up from IDR 4.4 trillion in the same month the previous year. (Indonesian Fintech Association. (2021)).

However, the growth of fintech in Indonesia also poses several challenges, such as data security and privacy risks, and a lack of clear regulation. Therefore, the Indonesian government has launched several initiatives to regulate and supervise the fintech industry, including by

establishing the Financial Services Authority (OJK) as the financial sector regulator. (Indonesian Fintech Association. (2021)).

Insurtech: The Development in Indonesia

Insurtech or insurance technology is an industry that continues to grow rapidly in Indonesia. According to the Indonesian Fintech Association (Aftech) report in 2021, the number of insurtech companies in Indonesia increased from 28 in 2018 to 41 in 2020. Meanwhile, the total investment received by insurtech companies in Indonesia reached US\$ 56.4 million in 2020, up from US\$ 27.4 million in the previous year. (Indonesian Fintech Association. (2021)).

One of the factors accelerating the growth of insurtech in Indonesia is increasing public awareness of the importance of having insurance. According to a survey from PwC, around 48% of respondents in Indonesia stated that they had bought insurance products through digital platforms in 2020. This shows that technology adoption in the insurance industry is getting higher in Indonesia. (PwC. (2020)).

In 2021, the most developed insurtech sectors in Indonesia will be microinsurance and health insurance. According to data from the Indonesian Life Insurance Association (AAJI), microinsurance premiums increased by 35.1% in 2020, while health insurance premiums increased by 7.5%. In addition, there are also several insurtech companies that are developing insurance products based on blockchain and artificial intelligence (AI). (Indonesian Life Insurance Association. (2021)).

Even so, the growth of insurtech in Indonesia also raises several challenges, such as a lack of public understanding of digital insurance products and concerns about data privacy. Therefore, the Indonesian government and insurance industry regulators such as the Financial Services Authority (OJK) and AAJI, continue to work to increase public understanding and provide clear regulations for the insurtech industry in Indonesia. (Financial Services Authority. (2021)).

Proptech: The Development in Indonesia

Proptech or property technology is a rapidly growing industry in Indonesia. According to a report from the Indonesian Fintech Association (Aftech) in 2021, the number of proptech companies in Indonesia increased from 58 in 2018 to 67 in 2020. Meanwhile, the total investment received by proptech companies in Indonesia reached US\$ 58.2 million in 2020, up from US\$ 26.2 million in the previous year. (Indonesian Fintech Association. (2021)).

The growth of proptech in Indonesia is driven by increasing demand for more affordable and efficient properties, as well as increasing adoption of technology in the property industry. One of the rapidly growing proptech sectors in Indonesia is online property platforms, such as Rumah.com and 99.co. In addition, there are also proptech companies that develop technology solutions to assist the investment process and property management. (Rumah.com.(2021)).

In 2021, there are several proptech trends developing in Indonesia, such as the use of augmented reality (AR) and virtual reality (VR) to display properties interactively, as well as the development of a blockchain-based property platform. In addition, there are also proptech companies that develop solutions to help property owners manage their properties efficiently, such as property management applications and Internet of Things (IoT) devices to control the environment within the property. (DailySocial.id. (2021)).

Nonetheless, the growth of proptech in Indonesia also poses several challenges, such as a lack of public understanding of property technology and difficulties in obtaining initial funding. Therefore, the Indonesian government and property industry regulators such as the Housing and Public Facilities Finance Regulatory Agency (BPKP) continue to work to increase public understanding and provide support for proptech companies in Indonesia. (Housing and Public Facilities Finance Regulatory Agency. (2020)).

Risks of Fintech, insurtech and Proptech

Along with the rapid development of Fintech, Insurtech and Proptech in Indonesia, there are several risks that users and industry players need to pay attention to. Some of these risks include data security risk, operational risk, legal risk, and reputation risk (PwC Indonesia.

(2019), Kompas.com. (2020), Forbes Indonesia. (2021), Bank Indonesia. (2019) and Kompas.com (2021).

Data security risk is one of the main risks that must be watched out for in the use of this technology. In this case, the user's personal and financial data can be the target of attacks by irresponsible parties. Therefore, Fintech, Insurtech and Proptech companies need to take adequate and international standard data security measures. In addition, operational risk also needs to be considered, because technology failures and system problems can cause service disruptions and harm users. Legal risk is also an important issue, because Fintech, Insurtech and Proptech companies must comply with the rules and regulations that apply in Indonesia, especially in terms of consumer protection and data security. Reputation risk is also an important issue in this industry, because users have high trust in the companies they use. A security incident or operational error can damage a company's image and reduce user trust. Nonetheless, Fintech, Insurtech, and Proptech companies in Indonesia have started to take action to mitigate these risks. Some of these actions include increasing data security, strengthening operational systems, complying with applicable regulations, and increasing transparency in managing user data.

Legal Aspects of Fintech

Legal aspects in the Fintech industry in Indonesia need special attention, because the use of technology in the financial industry can involve many parties, such as Fintech, Insurtech, and Proptech companies, customers, and regulatory agencies. One of the important legal issues is consumer protection. Fintech companies must comply with rules and regulations set by supervisory agencies such as the Financial Services Authority (OJK) and Bank Indonesia (BI), including in terms of consumer protection, such as provisions regarding information transparency, fulfillment of obligations to provide clear and timely information, as well as consumer personal data protection. In addition, legal aspects are also related to data security risks and online financial transactions. Fintech companies must pay attention to established security standards, including personal data security standards, and implement appropriate security protocols to protect online transactions. Fintech companies also need to pay attention to legal aspects related to business licenses and compliance with applicable financial regulations. Companies must ensure that they obtain the necessary business licenses from regulatory agencies, such as OJK or BI, and comply with relevant legal and regulatory requirements. (Financial Services Authority (OJK). (2020), Bank Indonesia (BI). (2021), Online Law. (2020), TNP2K. (2020).

In Indonesia, Fintech companies are regulated by several laws and regulations, including (Financial Services Authority (OJK) (2016), Financial Services Authority (OJK). (2018), Bank Indonesia (BI). (2017), Online Law. (2020):

1. Law Number 21 of 2008 concerning Islamic Banking, which regulates Islamic banks and other Islamic financial institutions.
2. Law Number 8 of 2010 concerning the Prevention and Eradication of Money Laundering Crimes, which regulates the prevention and eradication of money laundering and terrorism financing crimes.
3. Financial Services Authority Regulation Number 77/POJK.01/2016 concerning Information Technology-Based Lending and Borrowing Services, which regulates operational terms and conditions for information technology-based lending and borrowing service providers.
4. Financial Services Authority Regulation Number 13/POJK.02/2018 concerning Digital Financial Innovation in the Financial Services Sector, which regulates the terms and conditions for implementing digital financial innovations.
5. Bank Indonesia Regulation Number 19/12/PBI/2017 concerning Implementation of Financial Technology, which regulates operational requirements and conditions for financial technology providers.

Legal Aspects of Insurtech

In Indonesia, insurance services based on information technology or insurtech are regulated by several laws and regulations, including (Financial Services Authority (OJK). (2020), Hukum Online. (2021), Kompas. (2021) and Forbes Indonesia. (2019):

1. Law Number 40 of 2014 concerning Insurance, which regulates insurance activities in Indonesia.
2. Financial Services Authority Regulation Number 81/POJK.05/2020 concerning Digital Financial Innovation in the Financial Services Sector, which regulates the terms and conditions for implementing digital financial innovation in the financial services sector, including insurance.
3. Financial Services Authority Regulation Number 57/POJK.05/2020 concerning the Implementation of Information Technology-Based Insurance Services, which regulates operational terms and conditions for providers of information technology-based insurance services.

Legal Aspects of Proptech

In Indonesia, property services based on information technology or proptech are regulated by several laws and regulations, including (Financial Services Authority (OJK). (2020), Financial Services Authority (OJK). (2018), Online Law (2021) , Kompas.(2021) and Liputan6.(2020)):

1. Law Number 5 of 1960 concerning Basic Agrarian Regulations, which regulates land ownership and use in Indonesia.
2. Regulation of the Minister of Agrarian Affairs and Spatial Planning/Head of the National Land Agency Number 29 of 2016 concerning Procedures for Electronic Registration of Land Rights and/or Property Rights over Flat Units.
3. Financial Services Authority Regulation Number 13/POJK.03/2020 concerning Digital Financial Innovation in the Capital Markets and Technology-Based Financial Institutions Sector.
4. Financial Services Authority Regulation Number 37/POJK.05/2018 concerning Information Technology-Based Money-Lending Services, which regulates information technology-based money-lending services, including loan services for the property sector.

4. Conclusions and Suggestions

The results of the study show that these three sectors have experienced significant developments in recent years, especially in terms of product and service innovation, as well as an increase in the number of users. However, there are also risks that need attention, such as data security risk, credit risk and legal compliance risk. Therefore, companies in the fintech, insurtech and proptech sectors need to strengthen their security and risk management systems. In the legal aspect, this research shows that regulations and policies in Indonesia are still quite limited and have not fully supported the development of these sectors. However, the Indonesian government has started to pay attention to this and is working to develop a more comprehensive regulatory framework for these financial technology sectors. Therefore, companies in these sectors need to pay attention to the applicable rules and regulations and ensure their compliance with the law. In conclusion, the fintech, insurtech and proptech sectors in Indonesia offer many opportunities and potential for growth, but also have risks and challenges that need attention. Companies in these sectors need to strengthen their security and risk management systems and ensure compliance with applicable rules and regulations to optimize their future growth potential.

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