

A Comparative Study of Fintech Ecosystems in Indonesia and The Uk: A Comparative Study for Optimal Growth and Regulation

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ABSTRACT

Monetary policy plays a central role in regulating a country's economic stability. Through instruments such as interest rates and cash regulations, central banks strive to control inflation, manage economic growth, and maintain financial system stability. Effective monetary policy is key to creating a stable and sustainable economic climate. This study aims to compare the fintech ecosystems in Indonesia and the UK and provide policy recommendations. Using a comparative descriptive method with analysis of literature, reports, and relevant resources, the UK is shown to have a strong financial infrastructure, progressive regulations, higher financial inclusion, and sound financial literacy. On the other hand, Indonesia faces challenges in financial infrastructure that need to be strengthened, regulations that need to be adapted, and financial access and inclusion that need to be improved. Policy recommendations include inclusive regulation through the establishment of a regulatory sandbox, collaboration between government, industry, and traditional financial institutions, increasing financial literacy through educational programs, strict data protection and cybersecurity, and improving technological infrastructure for equal access to fintech. By implementing these recommendations, Indonesia can develop an inclusive and sustainable fintech sector in line with the UK's success.

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INTRODUCTION

Monetary policy plays a central role in regulating a country's economic stability. Through instruments such as interest rates and cash regulations, central banks strive to control inflation, manage economic growth, and maintain financial system stability. Effective monetary policy is key to creating a stable and sustainable economic climate. The Financial Services Authority (OJK) plays a crucial role in supervising and regulating the financial services sector in Indonesia. According to an official report from the OJK (OJK, 2021), the OJK is tasked with protecting consumer interests, preventing systemic risk, and ensuring compliance by financial services institutions with applicable regulations and standards. The OJK also plays a role in facilitating the development of the financial services sector, creating a conducive environment for innovation, growth, and financial inclusion (OJK Annual Report 2020).



Financial Technology, or Fintech, is a rapidly growing industry in Indonesia, as it is in much of the world. In recent years, the number of new fintech companies has doubled. This has put pressure on regulators to create regulations that allow them to operate in the formal financial sector and protect both customers and the government (Davis et al., 2017). Indonesia faces several challenges in implementing fintech policies. Some key challenges that need to be addressed include:

- 1) **Comprehensive Regulation:** Developing adequate and comprehensive regulations is a critical challenge in implementing fintech in Indonesia. Clear and up-to-date policies are needed to ensure consumer protection, regulate fintech activities, and address related risks.
- 2) **Adequate Digital Infrastructure:** Providing robust and affordable digital infrastructure is a challenge, especially in less developed regions. Limited access to adequate internet networks and technology can be a barrier to the widespread provision of fintech services throughout Indonesia.
- 3) **Financial Trust and Literacy:** Increasing public trust in fintech and improving financial literacy are challenges that need to be addressed. A better understanding of fintech products, their benefits, risks, and how to use them needs to be disseminated so that the public can make informed financial decisions and feel comfortable using fintech services.
- 4) **Data Security and Privacy:** Another important challenge is maintaining the security and privacy of fintech user data. Data breaches and cyberattacks are real threats. Strong protection of personal data and the implementation of adequate security measures are priorities to build fintech user trust.
- 5) **Financial Inclusion:** Indonesia still faces challenges in increasing financial inclusion, particularly in rural areas and for groups that still lack access to formal financial services. Fintech can be a potential solution, but greater efforts must be made to ensure that fintech services are accessible to all levels of society.

Table 1. Comparison of the Financial Sector in Indonesia and the UK

Key Points	Indonesia	The UK
Regulatory Authority	Otoritas Jasa Keuangan (OJK)	Financial Conduct Authority (FCA)
Fintech Regulatory Framework	OJK Regulations No. 77/POJK.01/2016	FCA dan Bank of England
Regulatory Sandbox	Available	Available
Open Banking	Under development	It has been introduced
Peer-to-Peer Lending	Regulated by OJK	Regulated by the FCA
Digital Payments	Significant growth	A mature digital payment ecosystem
Cryptocurrency	Cautious approach	Open approach and open regulation
Financial Inclusion	Financial inclusion program launched	Commitment to financial inclusion
Cross-Border Remittances	International remittance fintech platform available	Various remittance and money transfer service options
Regulatory Approach	A conservative approach	An inclusive approach

Source: Processed data (2025)

Fintech Regulatory Framework: Indonesia has developed a fintech regulatory framework by issuing OJK Regulation No. 77/POJK.01/2016, which covers various aspects such as payment services, peer-

to-peer lending, and crowdfunding. In the UK, fintech regulation has evolved through a more holistic and inclusive approach, with the regulatory framework issued by the FCA and the Bank of England.

The objectives of this study include: (1) Evaluating the current state of Indonesia's OJK information system, examining its infrastructure, data collection methods, risk management capabilities, regulatory reporting mechanisms, and technology integration; (2) Identifying and analyzing specific challenges and limitations of the OJK information system, with a focus on data accuracy, timeliness, reliability, and scalability to address the increasing complexity of financial transactions; (3) Comparing the OJK information system with the information system of the Financial Conduct Authority (FCA) in the UK, an established authority known for its effectiveness and technological sophistication.

METHODS

This research focuses on the implementation of financial technology policies in Indonesia and the UK. Secondary data, in the form of published reports, has been reviewed to highlight the Digital Financial Services Ecosystem in both countries, its challenges, and potential opportunities. The data was obtained through official websites and official reports from the archives of relevant financial institutions in each country. The data consists of official reports, published reports, and news reports from each country.

This research method adopts a comparative descriptive approach to analyze the phenomena. This approach was chosen because it allows for comparison of two or more elements within a robust economic framework, identifying differences and similarities, and accurately describing the characteristics of each element.

RESULT AND DISCUSSIONS

INDONESIA

The State of Financial Technology in Indonesia

Indonesia has a financial technology (fintech) and regulatory technology (regtech) ecosystem that has experienced rapid development in recent years. Financial technology innovation and progressive regulatory measures have created a dynamic and thriving ecosystem. Let's explore how the fintech and regtech ecosystems are developing in Indonesia through several examples and quotes from trusted sources.

The fintech ecosystem in Indonesia has become one of the most dynamic in Southeast Asia. Indonesia, with its large population and high internet penetration, has significant potential for fintech growth. According to data from the Indonesian Fintech Association (AFTECH), in 2020, there were more than 400 fintech companies operating in Indonesia, spanning digital payments, peer-to-peer lending, insurance, investment, and other sectors. According to a 2020 report by PWC and Google, "Indonesia is one of the largest fintech markets in Southeast Asia with significant growth potential." (PWC and Google, "The Indonesian Fintech Landscape in 2020")

This growth is inseparable from the support of the government and regulators. The Financial Services Authority (OJK) has issued various regulations specifically governing the fintech sector,



including Regulation No. 77/POJK.01/2016. This regulation provides a clear framework for fintech companies, protects consumers, and encourages innovation in the financial sector. The Regulatory Sandbox program introduced by the OJK also provides space for fintech companies to test innovative products and services by reducing regulatory barriers.

Furthermore, collaboration between the public and private sectors has helped develop the fintech ecosystem. The government, through the Ministry of Communication and Informatics, has launched various programs to support startup development and innovation in the digital sector, including fintech. Initiatives such as the Creative Economy Agency (BEKRAF) and the National Movement for 1000 Digital Startups also provide encouragement for fintech startups to grow and develop.

The digital payment fintech sector is also one of the fastest-growing in Indonesia. Companies like GoPay, OVO, and Dana have dominated the market by providing easy and fast digital payment services. Furthermore, the peer-to-peer (P2P) lending sector has also experienced rapid growth. However, concerns regarding high interest rates and high credit risks have also emerged. This highlights the need for stricter regulations to protect consumers and ensure the sustainability of the P2P lending industry.

Government support is also crucial in addressing deficiencies and encouraging sustainable fintech growth. Initiatives such as providing technological infrastructure, developing human resources with fintech skills, and access to funding are key factors that must be considered to create a conducive environment for fintech growth. (Financial Services Authority (OJK). 2020 Annual Report.

Problems Facing Financial Technology in Indonesia

Fintech in Indonesia has experienced rapid growth, but several shortcomings and problems remain. Indonesia also continues to experience low levels of financial inclusion. Despite the rapid growth of fintech, a large portion of the Indonesian population still lacks access to financial services. According to Bank Indonesia data, in 2020, the financial inclusion rate in Indonesia was only around 77.8%, meaning that many people remain unreached by fintech services. (Bank Indonesia, 2021) Digital payment adoption remains low among the majority of Indonesia's unbanked or underbanked population. According to a report by the Financial Services Authority (OJK), the penetration rate of digital financial services was still below 50% in 2020.

Geographic inequality in Indonesia is also a factor hindering fintech in Indonesia. Fintech growth tends to be concentrated in large cities like Jakarta, while access to fintech services in rural areas remains limited. This geographic disparity creates gaps in access and adoption of financial technology across Indonesia. (Kompas, 2021)

Furthermore, Indonesia faces the problem of low financial literacy. Many people are still unfamiliar with technology and lack an understanding of the risks and benefits of using fintech. (Source: Financial Services Authority (OJK), 2020). Many individuals lack an adequate understanding of basic financial concepts and an awareness of the importance of intelligent financial management.

One key factor is the lack of integrated financial education in the formal education curriculum. Most schools do not yet teach the financial knowledge and skills necessary for everyday life. This lack of training leaves many adults without a basic understanding of how to manage a budget, save, and invest their money wisely. (Source: Bank Indonesia, 2020 Annual Report)

Access to reliable and easy-to-understand financial information is also a challenge. Especially in rural areas, access to financial institutions and relevant information sources is often limited. This lack of understanding of available financial services and how to use them properly can prevent people from fully utilizing the potential offered by financial products and services. (Source: World Bank, Global Findex Database 2017)

Low financial literacy can also be caused by the complexity of financial products that are difficult to understand. For many people, complicated financial terms and concepts can be a barrier to properly understanding financial products and services. A lack of understanding of the risks and benefits of financial products, as well as a lack of transparency in explaining fees and contract terms, can make people hesitant and reluctant to engage in intelligent financial decision-making. (Source: Financial Services Authority (OJK), 2020 Annual Report)

Security and privacy issues are also a concern in the fintech ecosystem in Indonesia. Along with the growth of fintech, risks of data security and misuse of personal information arise. Data protection and privacy are crucial issues that must be addressed through clear regulations and effective law enforcement. (Source: Financial Services Authority (OJK), 2020) Cybersecurity awareness among fintech users and the general public remains low. Many users lack an understanding of security risks and often fail to adopt strong security practices, such as using strong passwords and protecting personal information. (Directorate General of Informatics Applications, Ministry of Communication and Informatics, 2020) On the other hand, weaknesses in fintech companies' technological infrastructure and security systems can also create opportunities for cyberattacks. Sometimes, smaller fintech companies may not have sufficient resources to implement and maintain robust security systems.

To address these shortcomings, the Financial Services Authority (OJK) has been actively issuing regulations aimed at protecting consumers and ensuring the sustainability of the fintech industry in Indonesia. Regulations such as OJK Regulation No. Regulation (POJK) No. 77/POJK.01/2016 has provided a clear framework for fintech companies. Furthermore, the OJK launched a Regulatory Sandbox program that allows fintech companies to test new products and services in a regulated environment.

To address low financial literacy in Indonesia, important steps must be taken. Inclusive financial education must be strengthened and expanded, both through formal education curricula and financial training and guidance programs. Public awareness campaigns on financial literacy and easy access to reliable financial information must also be enhanced. Furthermore, financial institutions and the government need to collaborate to simplify financial products and services and increase transparency in communications with consumers. (Source: Bank Indonesia, 2020 Annual Report; Financial Services Authority (OJK), 2020 Annual Report)

The government, regulators, fintech companies, and educational institutions must work together to increase financial inclusion, strengthen financial literacy, and develop an effective regulatory framework. This will ensure the sustainable growth of fintech and provide broader benefits to society. Joint efforts to improve financial literacy and educate the public about fintech will also contribute to the continued success and growth of the fintech sector in Indonesia.

THE UK

The State of Financial Technology in the UK

Fintech in the UK has achieved a strong and innovative position in the global market. The country is known as a leading fintech hub globally, with London being one of its most prominent centers. The following is a narrative analysis of the state of fintech in the UK. The UK has a very strong and mature fintech ecosystem. Several factors have contributed to the rapid growth of this industry. One important factor is its advanced financial infrastructure, such as sophisticated payment systems and progressive regulation. Furthermore, the presence of strong traditional financial institutions, such as major banks and well-known capital markets, has created a conducive environment for fintech innovation.

London's long-standing dominance of the GFCI is due to a number of factors, including its deep and liquid financial markets, its robust regulatory environment, and its highly skilled workforce. The city is also a major hub for international trade and investment. However, London's position as a global financial center has come under pressure in recent years due to a number of factors, including the UK's decision to leave the European Union. As a result, New York has been able to close the gap on London and even briefly overtake it. Despite these challenges, London remains a highly competitive financial center. The city possesses a number of strengths that will help it maintain its position at the top of the GFCI in the years to come. These include its strong global connections, its deep talent pool, and its commitment to innovation.

Progressive and innovation-friendly regulation is one of the main strengths of fintech in the UK. The Financial Conduct Authority (FCA) has implemented an inclusive regulatory approach, allowing fintech companies to operate under more flexible rules. Furthermore, the FCA has launched the Regulatory Sandbox initiative, which allows fintech companies to test their products and services in a regulated environment. This approach encourages innovation, provides fintech companies with the opportunity to prove their products' usefulness, and increases investor and consumer confidence.

The UK also has a robust fintech investment ecosystem. Numerous venture capital firms are active and ready to invest in promising fintech companies. Furthermore, the close relationship between fintech companies and traditional financial institutions has facilitated investment, collaboration, and overall industry growth.

The success of fintech in the UK can also be attributed to the high level of financial inclusion and technology acceptance among UK consumers. Adoption of digital payments, digital banking services, and other fintech services is quite high among UK consumers. The UK society has a high level of openness to financial technology and innovation, which facilitates fintech growth. However, like the fintech industry in other countries, the UK faces challenges. First, increasing competition and technological evolution continue to push fintech companies to remain innovative and relevant. Companies must keep up with the latest trends and maintain their competitive edge in the face of increasingly fierce competition.

Data security and privacy are also key concerns in the UK. Facing cyber threats and data misuse, fintech companies need to prioritize the security and protection of consumer data. Investing in robust security and compliance infrastructure is crucial to maintaining consumer trust.

Overall, the fintech landscape in the UK can be described as one of the most advanced and innovative in the world. Robust financial infrastructure, progressive regulation, a robust investment



ecosystem, and a high level of financial inclusion are key factors in the industry's success. By continuing to innovate and overcome challenges, the UK can maintain its position as a leading fintech hub globally.

The following are some factors that have helped the UK achieve optimal fintech strengths:

- a) **Robust Financial Infrastructure:** The UK has a developed and well-integrated financial infrastructure, which includes sophisticated payment systems, a strong presence of traditional financial institutions, and good access to capital markets. This infrastructure provides a strong foundation for fintech development in the country. (Tech Nation, 2020)
- b) **Progressive Regulation:** The UK has adopted a progressive regulatory approach to facilitate fintech growth and innovation. The UK Financial Conduct Authority (FCA) has created an inclusive and responsive framework that provides fintech companies with the flexibility to operate and test their innovative products. (Tech Nation, 2020)
- c) **Robust Investment Ecosystem:** The UK has a robust investment ecosystem to support fintech growth. There is good access to venture capital, institutional investors, and other financial resources ready to invest in promising fintech companies. (Innovate Finance, 2020)
- d) **Collaboration between Fintech and Traditional Financial Institutions:** The UK encourages collaboration between fintech companies and traditional financial institutions. The close relationship between the two sectors facilitates knowledge exchange, access to networks, and the ability to co-innovate. (Innovate Finance, 2020)
- e) **High Technology Adoption:** The UK has a high level of technology adoption, including digital banking, digital payments, and other fintech services. This high adoption rate creates strong demand for innovative fintech solutions. (Innovate Finance, 2020)

Challenges Facing Financial Technology in the UK

Although the UK enjoys a strong position as number two in the GFCI, it still faces several weaknesses, including:

- a) **Brexit and Uncertainty:** The UK's exit from the European Union (Brexit) has created uncertainty in the financial and fintech markets. Policy and regulatory changes related to Brexit could impact market access, trade, and collaboration in the fintech sector. (Tech Nation, 2020)
- b) **Fierce Global Competition:** The UK operates in a highly competitive global business environment. Other countries have also developed robust fintech ecosystems and are striving to attract fintech investment and talent. Therefore, the UK must continue to innovate and maintain its competitive edge to remain a leader in the fintech industry. (Innovate Finance, 2020)
- c) **Cybersecurity and Data Protection:** Like other countries, the UK faces challenges in cybersecurity and data protection. Cybersecurity threats, hacking attacks, and data breaches can undermine consumer trust in fintech companies and lead to significant financial losses. Therefore, data protection and cybersecurity are important priorities in the fintech industry. (Tech Nation, 2020)
- d) **Financial Access and Inclusion Gap:** Although the UK has a relatively high level of financial inclusion, there are still gaps in access and inclusion in some communities. Some groups still face challenges in accessing financial services and leveraging fintech innovations. The government and industry need to work together to improve financial inclusion and ensure equitable access for all. (Innovate Finance, 2020)

COMPARISON OF FINTECH IN INDONESIA AND THE UK

Table 2. Financial Technology Benchmarks in Indonesia and the UK

Aspect	Indonesia	The UK
Financial Infrastructure	Infrastructure needs to be strengthened	Advanced and well-integrated infrastructure
Regulations and Policies	Challenges in adequate regulation require continuous adaptation.	Progressive and inclusive regulations and innovative approaches
Financial Access and Inclusion	Challenges in financial access and inclusion, but fintech can increase financial inclusion	Higher levels of financial inclusion and better access to financial services

Source: Processed data (2025)

A comparison of Indonesia and the UK's fintech ecosystems can provide interesting insights into the differences and similarities between the two countries in developing the fintech industry.

Financial Infrastructure

Indonesia's financial infrastructure still needs to be strengthened to support fintech growth. While there has been an increase in digital payments and access to digital banking, gaps in access to financial services remain in rural areas and among those without access to traditional banks. Another challenge is the uneven distribution of technological infrastructure across the country, particularly in rural areas.

Meanwhile, the UK's financial infrastructure is highly developed and well-integrated. Advanced payment systems, access to capital markets, and a robust network of traditional financial institutions create a conducive environment for fintech growth. The existence of a robust technological infrastructure and good internet connectivity enable fintech companies to operate effectively.

The UK has a clear advantage in terms of a robust and well-integrated financial infrastructure. This mature infrastructure provides a solid foundation for fintech development. Indonesia, on the other hand, needs to continue improving its financial and technological infrastructure to support fintech growth across the country.

Regulation and Policy

Regulatory authorities in Indonesia, such as the Financial Services Authority (OJK) and Bank Indonesia (BI), have taken steps to develop an adequate fintech regulatory framework. However, several challenges remain, including ensuring regulatory consistency and adaptability to technological developments. More flexible regulations, such as the Regulatory Sandbox, have been introduced to encourage fintech innovation. However, continued regulatory updates are needed to address the rapid technological developments.

The UK is known for its progressive and inclusive regulatory approach to fintech. The FCA has created a conducive environment for fintech innovation through its adaptive regulatory approach and the Regulatory Sandbox initiative. The success of UK regulation and policy has helped attract investment, facilitate the growth of fintech companies, and boost investor and consumer confidence.

The UK has a strong position in terms of progressive and inclusive regulation and policy. This adaptive regulatory approach and the Regulatory Sandbox initiative have helped foster fintech innovation. In Indonesia, despite efforts to develop an adequate regulatory framework, ongoing updates and adaptation to technological developments are still needed.

Financial Access and Inclusion

Indonesia faces challenges in terms of financial access and inclusion. Despite increasing access to banking services and digital payments, there are still segments of the population that lack access to formal financial services. Fintech in Indonesia plays a crucial role in increasing financial inclusion by providing accessible financial services to people previously excluded from traditional financial institutions.

The United Kingdom has a higher level of financial inclusion and better access to financial services. However, challenges remain in ensuring fair financial inclusion and equal access for all levels of society.

Indonesia faces challenges in achieving broad financial access and inclusion. Fintech has significant potential to increase financial inclusion in Indonesia by providing innovative and accessible financial solutions. The United Kingdom, despite having a higher level of financial inclusion, must also strive to ensure equitable financial inclusion for all.

Overall, the United Kingdom has advantages in terms of robust financial infrastructure, progressive regulation, and higher levels of financial inclusion. On the other hand, Indonesia faces challenges in terms of adequate financial infrastructure and regulation, but has significant potential to increase financial inclusion through fintech.

CONCLUSION

From the comparison results in the previous chapter, the following conclusions can be drawn:

1. Financial Infrastructure: The UK has a strong and well-integrated financial infrastructure, while Indonesia still needs to strengthen its financial infrastructure to support fintech growth.
2. Regulation and Policy: The UK has a progressive and inclusive regulatory approach, while Indonesia is developing an adequate regulatory framework with challenges in keeping up with technological developments.
3. Financial Access and Inclusion: The UK has a higher level of financial inclusion with better access, while Indonesia still faces challenges in achieving broad financial inclusion but has significant potential to increase it through fintech.
4. Cybersecurity: Both the UK and Indonesia face challenges in cybersecurity, but both need to focus on data protection and security to maintain consumer trust.
5. Financial Literacy: Indonesia faces low financial literacy, while the UK has higher financial literacy.
6. Overall, the UK has advantages in terms of strong financial infrastructure, progressive regulation, higher levels of financial inclusion, and higher financial literacy. However, Indonesia has significant potential to increase financial inclusion through fintech and is developing adequate regulations. It is crucial for Indonesia to continue strengthening its financial infrastructure, improving financial literacy, and addressing challenges to support broader fintech growth and inclusion in the country.

Policy Recommendations

Based on the progress of fintech in the UK, here are some policy recommendations that can be implemented in Indonesia to encourage optimal fintech development:

1. **Inclusive Regulatory Approach:** Indonesia can adopt an inclusive regulatory approach similar to that implemented in the UK. This involves the active involvement of regulatory authorities in supporting fintech innovation with an adaptive regulatory framework. The Indonesian government can facilitate the establishment of a regulatory sandbox, which provides space for fintech companies to test their products and services in a regulated environment.
2. **Collaboration between the Government, Industry, and Traditional Financial Institutions:** Indonesia can strengthen cooperation between the government, the fintech industry, and traditional financial institutions. This close collaboration can create synergies between fintech innovation and the expertise and trust of traditional financial institutions. The government can facilitate forums for dialogue and cross-sector cooperation to encourage knowledge exchange and create a conducive environment for fintech growth.
3. **Improving Financial Literacy:** To support fintech development, it is crucial for Indonesia to improve financial literacy among the public. The government can launch financial education programs that cover understanding fintech, financial digitalization, and the associated risks and benefits. This program can be implemented through public campaigns, training, and the inclusion of financial literacy in the education curriculum.
4. **Data Protection and Cybersecurity:** Data security and consumer protection must be a primary focus in fintech development in Indonesia. The government can strengthen regulations related to privacy and data protection, and encourage the adoption of strict cybersecurity standards for fintech companies. Strict sanctions must be applied to data security breaches to maintain consumer trust.
5. **Adequate Technological Infrastructure:** Indonesia needs to continue strengthening its technological infrastructure, particularly fast and widespread internet access, to support fintech development across the country. Investment in digital infrastructure and connectivity can expand fintech's reach and ensure equal access for all.

This policy recommendation draws on several factors contributing to the success of fintech in the UK. By implementing these policies, Indonesia can create a conducive environment for inclusive, innovative, and secure fintech growth. It is crucial for the government, regulators, industry, and society to work together to achieve this goal.

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