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Research paper

The Role of Banks in Developing Foreign Trade Techniques Under Fintech

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Abstract

Banks play a significant role in the economy, and among their key functions is financing foreign trade operations. Foreign trade is a method of promoting economic development and societal well-being, as it allows each country to leverage the resources of other nations to meet its needs. It is essential for every country, whether developed or developing, to have access to goods and services that are not available domestically. Even countries with a surplus of goods and services also need to trade with other countries to market that surplus and generate revenue from its sale. However, given the evolution and complexity of technology, it has become necessary for banks to utilize this technology, especially fintech, in foreign trade operations.

Keywords: *Banks; Foreign Trade; Fintech; Blockchain.*

1. Introduction

Banks play a pivotal role in the economy, one of their key functions being the financing of foreign trade operations. Foreign trade serves as a crucial mechanism for fostering economic development and societal welfare, enabling countries to leverage the resources of others to meet their needs. Access to foreign trade is essential for all nations, whether developed or developing, to acquire goods and services not available domestically. Even countries possessing a surplus of goods and services require trade with other nations to offload excess production and generate additional revenue.
However, in light of rapid technological advancements and increasing complexity, it has become imperative for banks to integrate these technologies, particularly financial technology (Fintech), into their foreign trade operations to enhance efficiency and effectiveness

1.1. Research questions

Based on the foregoing, the research problem of this study emerges through the following question:
What role do banks play in developing foreign trade technologies in light of fintech?
This question leads to a set of sub-questions:

- What are banks?
- What is foreign trade?
- What is fintech?
- How do banks contribute to the development of foreign trade technologies?

1.2. Objectives of the study

This study aims to address a range of points related to the study, which are embodied in the following:

- To address the most important theoretical concepts of the study.
- To highlight the role that banks play in developing foreign trade technologies in light of fintech.

2. Methods

In this study, we have adopted the descriptive-analytical method by describing the theoretical aspect of the subject under investigation and analyzing its related elements.

3. Theoretical Framework

3.1. The concept of banks

3.1.1. Origin of banks

"The word 'bank' (French: Banque, English: Bank) is linguistically derived from the Latin word 'Banca' and the Italian word 'Banco,' both meaning table. Initially, it referred to the counter on which money changers sat to convert currency. Goldsmiths and money changers, especially in Italy, practiced their trade of dealing in money by sitting at tables in ports and public places. The meaning then evolved to refer to the table on which currencies were counted and exchanged. Eventually, it came to mean the place where that table was located, i.e., the bank in the modern sense, and this word has become used in most languages" (Nasser 2015, p. 9).

3.1.2. Definition of a bank

"A bank is a financial institution whose main operations focus on collecting surplus funds from the public, business enterprises, or the state, for the purpose of lending them to others according to specific criteria, or investing them in specific securities" (Al-Sirafi 2016, p. 16).

3.2. The concept of foreign trade

3.2.1. Definition of foreign trade

The term foreign trade is sometimes used interchangeably with international trade or global trade, and it refers to:
"The process of commercial exchange that takes place between a country and other countries of the world, and this exchange includes tangible goods, services, money, and labor" (Al-Sous 2008, p. 9).
"The process of commercial exchange in goods, services, and other different factors of production between several countries to achieve mutual benefits for the parties involved in the exchange" (Hamdi 2010, p. 13).
- "The exchange of goods and services between countries, distinct from domestic trade conducted within a single nation" (Ministry of Economy 2024).

3.2.2. Importance of foreign trade

"There are at least three reasons explaining the vital role of trade in achieving global prosperity. First, trade enhances productivity by expanding the division of labor among countries. Second, trade enables export-driven economic growth by facilitating access to foreign markets. Third, trade strengthens economic security by providing valuable external alternatives for businesses and households in the event of negative shocks" (Geor Gieva & Okonjo-Weala 2023).
Thus, the significance of foreign trade lies in:

- Connecting nations, fostering interdependence.
- Expanding marketing capacity by opening new markets for a nation's products.
- Enhancing global welfare through broadening the base of productive resources.
- Providing access to goods that cannot be produced domestically or can be acquired at relatively lower costs.

3.2.3. Basic principles of international trade theory (FAO 2022)

- Absolute Advantage:

This refers to a country's ability to produce a good with higher productivity or lower costs compared to another country. In other words, it reflects a nation's capacity to produce a good at a lower price than its competitors and is one of the simplest measures of economic efficiency. However, absolute advantage is neither necessary nor sufficient to establish trade patterns that benefit all countries. For example, a country may lack an absolute advantage in all goods relative to another nation but can still engage in and benefit from trade due to its "comparative advantage "in specific goods.

- Comparative Advantage:

This is a country's ability to produce a specific good at a lower "opportunity cost "than its trading partners. Even if a country holds an absolute advantage in all goods compared to others, it benefits from importing goods with higher opportunity costs—those requiring more resources to produce relative to other domestically produced goods. By importing such goods, the country can allocate more resources to producing and exporting goods with lower opportunity costs, thereby maximizing gains. Theoretically, the principle of comparative advantage implies that all countries benefit from trade.

3.3. The concept of fintech

3.3.1. Concept of fintech

The word "Fintech" is short for "Financial technology", defined as:

- "Advancements in technology that have the potential to transform the delivery of financial services, driving the development of new business models, applications, processes, and products" (The World Bank 2022, p. 10).
- "Technologically enabled innovation in financial services that could result in new business models, applications, processes, or products with material effects on financial markets, institutions, and service delivery" (FSB 2022).

Fintech has a wide range of applications, from: (Hasan 2025, p. 148)

- Digital payments: Technology that allows business transactions to be made electronically. Reduces the need for cash in orthodox banking methods.
- Blockchain: A redistributed ledger technology that ensures secure, transparent, and tamper-proof transactions.

- Robo-advisors: A machine-controlled platform that provides financial advice and investment management services with minimal human intervention.

3.3.2. Fintech companies

Fintech firms have evolved rapidly over the last two decades, securing their position alongside traditional financial institutions. This is due, in large part, to their ability to harness technology to deliver affordable, accessible financial products and services at scale. Recently, the COVID-19 pandemic served as an unprecedented accelerator, and the industry's momentum has proven resilient since. With fintechs now central to the global financial system, it is critical to monitor key trends – ranging from market performance and customer shifts to regulation, fundraising, and technological innovation. (Ferri de Camargo Paes et al, 2025, p. 5).
Fintech companies are defined as: "Companies specialized in providing digital financial services to consumers or enabling other providers to deliver digital financial services. While many of these companies are relatively new to the financial sector, others have now become established public firms. Examples include digital payment providers (e.g., PayPal), financial infrastructure/connectivity providers (e.g., Plaid), digital insurance firms (e.g., BIMA, Policy Bazaar), and peer-to-peer lending platforms (e.g., Afluenta, Funding Circle, Investree)" (Feyen et al, 2021, p. vi).

3.3.3. Big tech companies

A Big Tech company is defined as: "A large company whose primary activity is digital services. Examples include online search engines, social media platforms, e-commerce platforms, ride-hailing platforms, and mobile network operators. Many Big Tech companies have begun offering direct support for digital financial services, leveraging their extensive customer bases and data on transactions and activities that lead to payments or needs for credit, insurance, or other financial services" (Feyen et al, 2021, p. vi).

3.3.4. Digital financial services

Digital financial services are defined as: "Financial services that rely on digital technologies for their delivery and use by consumers" (Feyen et al, 2021, p. vi).

3.3.5. The role of fintech in reshaping the future of the financial sector

Fintech, the application of digital technology to financial services, is reshaping the future of finance– a process that the COVID-19 pandemic has accelerated. The ongoing digitization of financial services and money creates opportunities to build more inclusive and efficient financial services and promote economic development. Fintech is transforming the financial sector landscape rapidly and is blurring the boundaries of both financial firms and the financial sector.
This presents a paradigm shift that has various policy implications, including: (The World Bank 2023)

- Foster beneficial innovation and competition, while managing the risks.
- Broaden monitoring horizons and re-assess regulatory perimeters as the embedding of financial services blurs the boundaries of the financial sector.
- Be mindful of evolving policy tradeoffs as fintech adoption deepens.
- Review regulatory, supervisory, and oversight frameworks to ensure they remain fit for purpose and enable the authorities to foster a safe, efficient, and inclusive financial system.
- Anticipate market structure tendencies and proactively shape them to foster competition and contestability in the financial sector.
- Modernize and open up financial infrastructures to enable competition and contestability.
- Ensure public money remains fit for the digital world amid rapid advances in private money solutions.
- Pursue strong cross-border coordination and sharing of information and best practices, given the supra-national nature of fintech.

4. Results and discussion

4.1. The role of banks in advancing foreign trade technologies

Based on the rapid advancement of fintech, banks are playing an increasingly important role in developing foreign trade technologies. This can be summarized in the following points:

- Streamlining Operations: Banks are streamlining foreign trade operations through the use of information technology to improve the management of documents and transactions. For example, electronic systems contribute to accelerating documentary credit procedures, reducing the need for paper transactions, and lowering operating costs.
- Improving Security: Financial technology contributes to enhancing the security of cross-border transactions thanks to technologies such as encryption and advanced verification techniques. Banks offer solutions such as two-factor authentication and data analysis to reduce the risks associated with foreign trade.
- Facilitating Financing: Banks provide advanced financing platforms such as digital loans and payment facilities, which help companies obtain the necessary financing to support their foreign trade activities. Artificial intelligence can also be used to analyze credit data and provide customized financing offers.
- Accelerating Transactions: Blockchain technology contributes to accelerating international payment and transfer processes by reducing the time required to complete transactions and reducing the costs associated with them. Banks are working to integrate this technology to improve the efficiency of international trade transactions.
- Data Analysis: Banks use big data analysis tools to analyze foreign trade data, which helps companies make more informed decisions about new markets and trade strategies.
- Compliance and Reporting: Financial technology helps banks comply with international and local standards by improving verification and reporting systems. This enhances transparency and contributes to reducing legal risks.
- Providing Specialized Consultations: Thanks to financial technology, banks can provide specialized consultations in foreign trade, including expansion strategies, risk management, and hedging strategies against currency fluctuations.

4.2. Examples of using blockchain technology in banking for foreign trade

- We.trade Platform:

We.trade Innovation is a joint-venture company owned by 12 banks, technology provider IBM, and global credit bureau and business information provider CRIF. The company was started with nine banks in January 2017 under the project name Digital Trade Chain and was officially renamed as we. trade in October 2017. we. trade has developed a digital trade platform based on the Linux Foundation's Hyperledger Fabric that runs on the IBM® Blockchain Platform. The we. trade digital platform delivers reliability, simplicity, and security to global trade transactions across trade finance and logistics. Clients can register with us. trade through their banks.

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In January 2018, A cargo of U.S. soybeans shipped to China became the first fully-fledged agricultural trade conducted using blockchain. Louis Dreyfus Co, Shandong Bohi Industry Co, ING, Societe Generale, and ABN Amro took part in the trade where the sales contract, letter of credit, and certificates were digitalised on the Easy Trading Connect (ETC) platform.

Began full operations in January 2019. This blockchain-based trading platform reduces counterparty risk and enables even the smallest companies to participate in cross-border trading. The platform also serves as a "one-stop shop" of real-time information on any trade visible to all parties and enables automatic payments through smart contracts.

- Contour Platform:

Using blockchain technology, the Contour platform tracks and traces information as it moves between parties. Contour's objective is to provide a single, simplified channel to enable digitization of the trade finance process, from issuance of Letters of Credit through to the exchange of documents.

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The blockchain Letter-of-Credit flow mirrors the existing letter of credit process (agreeing letter of credit terms, application, issuance, advising, amendment request and its approval, document presentation, discrepancy resolution, and bill settlement instructions). A single blockchain platform is used by all participants. eBL capabilities are integrated into the application, giving parties the option to transfer the eBL digitally through the platform in near real-time.

Contour links together banks and corporates on a decentralized network for paperless trade and trade finance. Additionally, the platform's open Application Programming Interface (API) is linked with an ever-growing number of partners like essDocs for electronic bills of lading (eBLs), Chinsay for contracts management, and Tradecloud for B2B trades.

They are focusing on one of the most paper-intensive processes – Letters of Credit (LC).

Main benefit(s) of the service: Enhanced regulatory compliance, Transaction Cost savings, Transaction Time savings, Simplified process, Increased trade flow.

Using blockchain technology, the Contour platform tracks and traces information as it moves between parties. It keeps all players in sync, reducing the need for reconciliation and speeding up your transactions, whilst providing you with end-to-end visibility. In the above transactions, this technology helped reduce the time taken for exchanging and checking documents, from the typical five to ten days to less than 24 hours.

In 2021, Standard Chartered announced the successful completion of the first cross-bank Letter of Credit (LC) transaction between Vietnam and Thailand conducted over blockchain, and the transaction was completed over the Contour network, in partnership with Asian Development Bank (ADB), Bank for Investment and Development of Vietnam, and Standard Chartered Bank (Thai).

- Marco Polo Network:

Marco Polo Network is on a mission to digitize and transform supply chain transactions, payments, and financing. Founded in 2017, the business is a fast-growing open account automation and working capital network that is based on blockchain technology.

Marco Polo Network connects data silos and supply chain systems that are scattered around the world. Rather than having a single destination application, the company provides a distributed ledger-based platform that connects all of its users to the network.

Marco Polo Network is essentially modernizing supply chain transaction processes by providing seamless integration and data exchange between trading parties, such as linking a large corporate buyer to their entire supply chain, as well as to their logistics and banking partners. The value of the network grows for every existing participant whenever a new organization joins, so the business has ambitious growth plans.

4.3. Fundamental dimensions of the place of fintech in compliance & reporting

- Automated Surveillance and Reporting: The fintech platforms leverage technology to automate transaction tracking, spot suspicious activity, and create regulatory reports.
- Data Security and Privacy: Firms need to comply with stringent data privacy regulations such as GDPR to secure customer data, an enforcement with which fintech solutions can assist due to the encryption and secure access controls that fintechs can apply.
- Regulatory Technology (RegTech): RegTech solutions enable fintech companies to simplify complicated compliance systems, enhance the efficiency of KYC/AML checks, or respond to new regulations more quickly.
- Risk Mitigation: Fintech organizations can avoid costly legal penalties, fines, and reputation damage by rolling out rigorous compliance programs that keep them on the right side of the law and foster good business practices.
- Building Trust: Good corporate citizens have solid privacy strategies that show they take their obligations to protect not only their customers' data, but also their personal information, very seriously.
- Optimal Usage of Resources: Automating compliance work saves resources and eliminates time that employees would have to spend on manual and routine tasks, preventing human errors and helping fintech scale.
- Providing for Growth: Compliance is essential to access new markets and establish global partnerships, as it shows customers and regulators that businesses are following international rules.
- Financial Sustainability: The Combined Rules also assist in the detection of the implicit criminal purpose. Compliance as a preventive measure against financial crimes preserves the soundness and stability of the financial system and contributes to overall market stability.

5. Conclusion

A bank is defined as a financial institution whose primary operations involve mobilizing surplus funds from the public, businesses, or the state to lend to others under specific terms or invest in designated securities. Foreign trade is defined as the exchange of goods and services between nations, distinct from domestic trade conducted within a single country. Fintech refers to technological advancements capable of transforming financial service delivery and driving the development of new business models, applications, processes, and products.

Banks play a pivotal role in advancing foreign trade technologies, particularly amid rapid developments in Fintech. As Fintech continues to evolve, banks are expected to persist in innovating and enhancing their services to meet client needs and bolster the global economy.

Key Findings of the Study:

- Banks play a critical role in financing foreign trade operations.
- Fintech enables banks to streamline and secure payment and financing processes in foreign trade.

Recommendations :

- Promote Financial innovation.
- Develop technological infrastructure.
- Train human resources in utilizing foreign trade technologies.
- Foster collaboration between banks and Fintech to drive economic growth and achieve sustainable development.

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Conflict of Interest Statement

The authors declare that there is no conflict of interest related to this study.

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