

Fintech and financial performance in the banking industry: A literature review

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ABSTRACT

This research conducts an in-depth literature review on the influence of fintech on the financial performance. The focus is to identify key findings from prior studies, understand concepts related to fintech adoption, and explore its impact on the firm. Analyzing literature from Scopus and Scopus databases, the study aims to provide a holistic overview of fintech's role in transforming the banking landscape. Fintech adoption is found to significantly enhance operational efficiency, affecting liquidity, profitability, and overall growth. Positive cash flow operations are crucial in determining financial performance, reflecting liquidity and operational sustainability. The study suggests that further research should delve into specific independent variables such as COVID-19 cases, lockdown policies, application characteristics, and others, as well as variables like the age of mobile banking applications, GDP per capita, and mobile penetration rates. This approach ensures a comprehensive analysis of existing knowledge, contributing valuable insights for future strategic planning in the financial technology and banking sectors.

KEYWORDS

Fintech; Financial Performance; Banking

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Introduction

Currently, we are facing a period of recovery from the impact of the global pandemic that hit the entire world in early 2020 (Moridu, 2020). Not only that but the world is also faced with a worldwide crisis that has a significant impact, especially in the global economy. The phenomenon that is currently attracting attention is the bankruptcy of three banks in the United States (US), namely Silicon Valley Bank (SVB), Signature Bank, and Silvergate Bank, which also has an impact on Switzerland and Europe (Alfatihah & Sundari, 2021). According to the Director of Bank Indonesia (BI), bank bankruptcies in the US are caused by unstable and very vulnerable business models. One factor is that the source of funds tends to come from large depositors, the majority of whom come from the same cluster, namely startup companies and financial technology companies (Moridu, 2020). Bank Indonesia (BI) emphasized that the Indonesian economy is still in a robust condition. Banking in Indonesia remains well maintained in terms of capital, credit risk, and liquidity (Director of Bank Indonesia, 2021). Minister of Finance Sri Mulyani stated that one of the causes of SVB's bankruptcy was the declining financial performance of startup companies, considering that SVB is a bank that funds startups. Even though there is a domino effect from the closure of three banks in the US, BI assures that good domestic policies can maintain national banking stability (Sri Mulyani, 2021).

Meanwhile, technological change has shaped our world in many ways. The history of technology begins with the discovery of simple tools by ancient humans, such as stone axes and wheels. Over time, technology continues to develop rapidly, driven by human curiosity, needs, and creativity (Damayanti & Syahwildan, 2022). In this modern era, technology has a significant impact on daily life, facilitating quick access to the latest information and providing sophisticated electronic services. Technological developments also have a significant impact on a country's economy. Technology is changing traditional economic practices into new, dynamic business models (Phan et al., 2019). One of the phenomena of financial technology (fintech) is in the spotlight in the financial industry today. Fintech is the result of a combination of financial services and technology that changes the way people interact with financial services (Lestari et al., 2021). In this context, banks and financial companies are faced with competition from fintech startups that provide more sophisticated and efficient services (Moridu, 2020). The global financial crisis in 2008 did not stop the development of financial technology. On the contrary, looking at the emergence of Bitcoin in 2009 and various fintech innovations in the following years, financial technology continues to develop (decoding.com). Fintech is not only becoming a competitor to banking sector companies but is also bringing significant changes in financial services, such as digital payments and facial analysis for payment verification.

In Indonesia, fintech developed by fintech startups is supervised by the Financial Services Authority (OJK). Fintech is considered a competitor to the banking sector with various products, especially in credit services (OJK). Currently, OJK reports that 103 fintech companies are licensed and directly supervised, with the majority offering loan products (OJK). In this era of digitalization, banks must continue to innovate to maintain their competitiveness. Fintech adoption is a strategic step, with the development of electronic banking services as one way. Electronic banking involves various types of information technology, such as online banking, mobile banking, SMS banking, and EDC ATM, to increase operational efficiency and provide easy transactions for customers (Sutarti et al., 2019).

This research aims to conduct an in-depth literature review regarding the influence of fintech on bank performance, especially conventional banks on the Indonesia Stock Exchange (BEI). The main focus is to identify key findings from previous research, develop an understanding of key concepts surrounding the adoption of fintech by banks, and explore the impact of fintech on traditional banking services. By detailing existing literature, this research seeks to provide a holistic picture of the role of fintech in changing the banking landscape and evaluate whether fintech adoption has had a positive or negative impact on the performance of conventional banks in Indonesia. The aim is to contribute thoughts and insights to strategy development in this area.

Methods

This research will apply the literature review method with a focus on literature sources documented in the Sinta and Scopus databases. The initial stage of research will involve searching for literature through academic databases, especially in Sinta, which is a national source, and in Scopus, which includes indexed international journals for the last five years. Literature selection will be carried out by filtering, ensuring the inclusion of sources that have high relevance to the research objectives. By utilizing these two databases, this research is expected to embrace the diversity of literature covering aspects of fintech and bank performance, providing a solid basis for an in-depth and up-to-date literature review analysis.

Results

Article identity

Table 1. Article identity

Num.	Author(s) and Year	Title	Journal
1	Ananda, G. C., Fariied, A. I., & Syaula, M. (2023).	The Effect of Financial Literacy and Financial Technology on Financial Performance (Case Study: Desa Kebun Kelapa)	<i>International Journal of Management, Economic and Accounting</i> , 1(2), 81-93.
2	Varma, P., Nijjer, S., Sood, K., Grima, S., & Rupeika-Apoga, R. (2022).	Thematic Analysis of Financial Technology (Fintech) Influence on the Banking Industry	<i>Risks</i> , 10(10), 186.
3	Fuadi, A. M., & Munawar, M. (2022).	Analisis Pengaruh Fintech Adoption Terhadap Profitabilitas Bank Umum Konvensional Di Indonesia.	<i>Contemporary Studies in Economic, Finance and Banking</i> , 1(1).
4	Fu, J., & Mishra, M. (2022).	Fintech in the time of COVID-19: Technological adoption during crises	<i>Journal of Financial Intermediation</i> , 50, 100945.
5	Riyanto, A., Raspati, G., Rahayu, Y., & Sopian, Y. (2021).	Implikasi arus kas aktivitas operasi terhadap kinerja keuangan.	<i>Moneter-Jurnal Akuntansi Dan Keuangan</i> , 8(1), 79-84.
6	Le, T. T., Mai, H. N., Phan, D. T., Nguyen, M. N., & Le, H. D. (2021).	Fintech Innovations: The Impact of Mobile Banking Apps on Bank Performance in Vietnam	<i>International Journal of Research and Review</i> , 8(4), 391-401.
7	Murtianingsih, T., & Hastuti, H. (2020).	Analisis Laporan Arus Kas untuk Menilai Kinerja Keuangan pada Industri Tekstil dan Garmen yang Terdaftar di Bursa Efek Indonesia (BEI) Periode 2016-2018	<i>Industrial Research Workshop and National 11(1)</i> , 833-839.
8	Jünger, M., & Mietzner, M. (2020).	Banking goes digital: The adoption of FinTech services by German households	<i>Finance Research Letters</i> , 34, 101260.
9	Kusumaningtyas, A., & Mildawati, T. (2019).	Pengaruh Arus Kas Operasi, Struktur Kepemilikan, Dan Ukuran Perusahaan Terhadap Kinerja Keuangan	<i>Jurnal Ilmu dan Riset Akuntansi (JIRA)</i> , 5(2).

Theory used

Research on the impact of Fintech on financial performance can involve four main theories, including Disruptive Innovation Theory, which offers a perspective on innovation that can shift paradigms in the financial industry. This theory views the adoption of Fintech as a source of innovation that can disrupt conventional business models. Additionally, the Technology Organization Environment (TOE) Theory can be employed to analyze how technological, organizational, and environmental factors interact in the context of Fintech, shaping the acceptance and implementation of this technology. The Information Systems Success Model Theory provides insights into critical factors influencing the success of information systems, which can be applied to measure the success of Fintech implementation. Meanwhile, Agency Theory can help understand the principal-agent relationship in the context of Fintech, especially regarding decision-making and the intermediary role of traditional financial institutions. By embracing these theoretical frameworks, research can investigate the holistic impact of Fintech adoption, involving innovative dynamics, technological aspects, information system success, and agency relationships that may influence the financial performance of companies.

Variable used

The relationship between various independent variables and their impact on Fintech adoption and financial performance of companies is intricate and multifaceted. Factors such as COVID-19 cases, lockdown policies, national characteristics, application features, and seasonal variations constitute external environmental variables that can influence the adoption and performance of Fintech. Additionally, macro-level factors including the age of mobile banking applications, GDP per capita, and mobile penetration rates reflect market and technological characteristics. The utilization of cutting-edge technologies like blockchain, AI, and machine learning in the banking industry represents another variable influencing Fintech adoption. Moreover, financial literacy, encompassing aspects like trust, transparency, financial expertise, self-assessment, pricing, risk, patience, and sociodemographic characteristics, plays a pivotal role in shaping public understanding and acceptance of financial innovations, including Fintech. Understanding the interplay between these variables and their collective influence on Fintech adoption and subsequent financial performance is essential for comprehensively assessing the evolving landscape of financial technologies in the modern business environment.

Result

Table 2. Result

Article num.	Result
1	Fintech adoption increased significantly during the covid-19 pandemic, especially in the "entertainment & music" and "lifestyle & social" application categories. Newer, more innovative fintech and bigtech companies may have a competitive advantage in developing and mobilizing new services and providing more "modularized" products specifically to targeted market segments. Fintech adoption is influenced by behavioral responses to the emergence of cases/deaths due to Covid-19 and government policies.
2	Empirical studies show that fintech innovation has a positive impact on bank performance in Vietnam. Banks' adoption of mobile banking technology has had a positive impact on fee-based income, consumer lending and money market deposits. The influence of mobile technology on financial performance is much stronger for small banks than for large banks. Meanwhile, in terms of balance sheet liabilities, small bank money market funds were positively impacted by the mobile banking application. In terms of balance sheet assets, consumer loans by small banks are positively impacted by mobile banking applications while large banks are not. GDP per capita has a positive effect on the Roe of small and large banks. The level of mobile phone penetration has a positive effect on bank ROA and ROE and the effect is greater for small banks.
3	There are four main themes and nine sub-teams that highlight the various channels through which new technologies influence incumbent banks and the socio-economic environment. Blockchain and cryptocurrencies received 44% of all research attention. With 28% of all studies, the next most popular topic was fintech and its impact on banking. The third most studied topic, with 11% of studies, was technology and how it is used in financial services with no particular focus on actual new technologies. Less research has been conducted on other subjects such as machine learning, fraud and cybersecurity, banking, customer and consumer decision making, financial inclusion, and lending.
4	The research results show that financial literacy and financial technology play an important role in improving village financial performance, especially in increasing operational efficiency and the efficiency enjoyed by its members. All statement items for the variable's financial literacy, financial technology, financial inclusion and financial performance were declared valid and reliable.
5	This study found that trust, transparency, and financial expertise significantly influence households' decisions to switch from traditional retail banking service providers to fintech. Specifically, households with low levels of trust, high levels of financial education, and a preference for transparency have a higher probability of switching. In contrast, household price perceptions do not appear to impact the likelihood of switching. This study also found that most households cannot imagine using fintech services exclusively.
6	Cash flow from operating activities has a significant influence on financial performance, especially on the factors of current liabilities, working capital and net profit of the entity. The magnitude of the impact of cash flow from operating activities on financial performance at PT. Dame Alam Sejahtera amounted to 20.8% and the remaining 79.2% was influenced by other factors in other financial statement items.
7	Hypothesis 1 (h1) in this study is supported statistically, namely that cash flow from operating activities has a positive effect on return on equity (roe). Hypothesis 2 (h2) in this study is not supported statistically, namely managerial ownership has no effect on the company's financial performance as measured by return on equity (roe). Hypothesis 3 (h3) in this study is not supported statistically, namely institutional ownership has no influence on the company's financial performance as measured by return on equity (roe). Hypothesis 4 (h4) in this study is supported statistically, namely company size has a positive influence on the company's financial performance as measured by return on equity (roe).
8	This research shows that in general textile and garment companies have good performance if examined from the ratio of cash flow to interest and the ratio of cash flow to net profit. However, from the ratio of cash flow to current liabilities, capital expenditure and total debt, these companies performed less well.

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- 9 The results of this research found that mobile banking, internet banking and ATMs had an effect on financial performance (ROA), then company age and company size (size) as control variables also had an effect on financial performance (ROA).
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Discussion

Fintech adoption on financial performance

Fintech adoption has significant implications for the financial performance of a business entity. In general, the implementation of financial technology can have a positive impact on a company's operational efficiency. Through automation of business processes and increased administrative efficiency, fintech adoption enables companies to achieve higher efficiency in their operational activities. By minimizing costs associated with transaction processes and financial management, companies can optimize the use of resources and achieve efficiencies that can contribute to improving financial performance (Le et al., 2021). On a more specific level, fintech adoption can also influence certain aspects of financial performance, such as liquidity, profitability, and company growth. The use of financial technology can increase liquidity by simplifying and speeding up the payment process and cash management (Fuadi, 2022). Additionally, through sophisticated data analysis and a better understanding of customer behavior, fintech can contribute to the development of more effective marketing strategies, thereby supporting a company's revenue growth and profitability (Fu & Mishra, 2022; Varma et al., 2022).

The adoption of Financial Technology (FinTech) is posited to confer operational advantages and greater efficiency compared to banks that eschew FinTech integration. Institutions embracing FinTech adoption are postulated to exhibit enhanced asset quality in the management of overhead costs associated with facilities and equipment. Financial technology, encompassing contemporary software and technological enterprises, constitutes a pivotal entity offering diverse financial services (Jünger & Mietzner, 2020). Empirical validation of the hypothesized proposition reveals that the active incorporation of financial technology imparts a discernible and intrinsic impact on the financial capabilities of business entities (Ananda et al., 2023). The entrepreneurial landscape interprets FinTech as a conduit for digital payment transactions. The burgeoning trajectory of financial technology in Indonesia is asserted to yield positive repercussions on the national economy, advocating for equity in prosperity distribution, fostering domestic lending, securing national funding, and fortifying national resilience.

Operating cash flow on financial performance

Operating cash flow has a vital role in determining the financial performance of a company. The impact covers various critical aspects, from liquidity and operational sustainability to the ability to pay debts on time. Precisely, positive operating cash flow reflects a company's ability to meet its daily financial obligations and run its operations without relying on external funding sources. In addition, the ability to repay debt, investment in growth projects, and the rate of return on investment are also closely related to the efficiency of operating cash flow. Analysis of operating cash flow forms the basis of assessing a company's financial health, revealing aspects such as operational efficiency, resource management, and cost structure that impact overall financial performance.

Cash flow from operating activities reflects a company's ability to generate internal funds from its main revenue-generating activities. A high amount of net cash shows the company's ability to pay obligations without relying on external loans. On the other hand, low or negative net cash indicates the company's difficulty in generating funds internally (Kusumaningtyas & Mildawati, 2019; Murtianingsih & Hastuti, 2020). Cash flow from operating activities is an indicator used to assess a company's ability to repay loans, maintain operational continuity, pay dividends, and invest without relying on external funding sources. These cash flows are related to the main activities that generate income, including transactions and other events that influence the determination of the company's net profit or loss (Riyanto et al., 2021).

Operating cash flow is crucial in determining a company's financial performance. Its positivity reflects liquidity and operational sustainability, avoiding dependence on external funding. The implication is that the ability to pay debts, invest, and operate efficiently is greatly affected. Operating cash flow analysis is the cornerstone of financial health evaluation, providing insight into efficiency and cost structure. Operating cash flow as a determinant of a company's ability to pay off debt, maintain operations, and plan dividends, emphasizes the urgency of maintaining positive operating cash flow to support strategic decisions and shareholder confidence.

Future research

Future research can observe in detail the impact of fintech adoption on financial performance by exploring the independent variables that can influence this phenomenon. A number of previous studies have highlighted factors such as COVID-19 cases, lockdown policies, country characteristics, application characteristics, and seasonality as significant influences, but the details need to be explored further. Variables such as mobile banking app age, GDP per capita, and mobile penetration rate can also be researched in more depth to understand their role in the context of fintech adoption and its impact on financial performance. New technological factors such as blockchain, artificial intelligence (AI), and machine learning can be the focus of research to assess their contribution to a company's operational efficiency and effectiveness.

Furthermore, aspects of financial literacy and psychological factors in making investment decisions, such as trust, transparency, and sociodemographic characteristics (marital status, highest level of education, occupation, net household income), can be studied to gain a more holistic understanding. Research can detail analyses of operating cash flow, managerial ownership structure, institutional ownership structure, and company size to understand the complex relationship between fintech adoption and financial performance. A behavioral finance approach that

explores psychological factors in investment decision-making can provide deep insight. This research is expected to make a significant contribution to understanding the impact of fintech adoption on financial performance, paving the way for the development of more adaptive and responsive business strategies amidst the dynamics of digital transformation.

Conclusion

In this research, it can be concluded that fintech adoption has significant implications for the financial performance of a business entity. The implementation of financial technology, as shown by research results, can have a positive impact on a company's operational efficiency. Through automation of business processes and increased administrative efficiency, fintech adoption is able to achieve higher efficiency in operational activities. More specifically, fintech adoption impacts certain aspects of financial performance, including liquidity, profitability, and company growth. The use of financial technology helps increase liquidity by simplifying and speeding up payment processes and cash management. Sophisticated data analysis and a better understanding of customer behavior are also contributors to the development of more effective marketing strategies, supporting revenue growth and company profitability.

In addition, operating cash flow is proven to be an essential determinant in determining a company's financial performance. Positive operating cash flow reflects operational liquidity and sustainability, avoiding dependence on external funding. The implication is that the ability to pay debt, invest, and operate efficiently is greatly influenced by healthy operating cash flow. Future research could deepen understanding of the impact of fintech adoption by detailing relevant independent variables, such as COVID-19 cases, lockdown policies, application characteristics, and others. Variables such as the age of mobile banking applications, GDP per capita, and mobile penetration rates could also be helpful research focuses. Likewise, in-depth research on financial literacy, psychological factors in investment decision-making, and other aspects can provide more comprehensive insights.

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