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Fintech, Financial Performance, and Financial Stability: A Hybrid Literature Review

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ABSTRACT

The relationship between financial technology (FinTech), financial performance, and financial stability has become an increasingly important issue in banking and financial services. This review examines how digital banking, payment technologies, platform finance, artificial intelligence, big data, blockchain, and open banking influence profitability, operating efficiency, risk-taking, and resilience. Rather than assuming that technological adoption produces uniformly positive outcomes, the review focuses on the conditions under which FinTech creates financial value and the circumstances in which it introduces new vulnerabilities.

The paper follows a hybrid review structure that combines a systematic search protocol with bibliographic mapping logic and qualitative content analysis. The literature is organised into three thematic clusters: (1) FinTech, bank performance, and competitive dynamics; (2) FinTech, bank risk-taking, and financial stability; and (3) digital innovation, financial inclusion, and the transformation of financial intermediation. Three cluster-based review tables summarise the research streams, representative studies, analytical approaches, theoretical foundations, and reported outcomes.

The synthesis indicates that FinTech can improve efficiency, customer reach, innovation, and selected dimensions of bank stability. However, results are contingent on institutional context, bank characteristics, governance, technology integration, and regulatory capacity. Competition may compress incumbent margins, while cyber exposure, model risk, third-party concentration, and rapid digital funding movements can weaken resilience. The review contributes an integrated framework in which FinTech affects financial performance through efficiency, innovation, and information channels, while stability outcomes depend on risk governance, operational resilience, market structure, and regulatory oversight.

The review offers implications for bank managers and regulators and identifies a future research agenda focused on causal identification, comparable FinTech measures, risk-adjusted performance, emerging markets, and systemic technology dependencies.

Introduction

Financial technology (FinTech) has grown to become a significant influence altering the form, offering and regulation of financial intermediation rather than be a supportive element of financial services. The digital banking, mobile payments, online lending,

artificial intelligence (AI), cloud computing, distributed ledger technology, and application programming interface transformed the customer acquisition, processing transactions, evaluating credit, and competing processes of financial institutions. In fact, FinTech describes a general ecosystem of technologies, companies, sites, and institutional structures and not a particular innovation (Arner et al., 2015; Gomber et al., 2018; Thakor, 2020).

The financial performance costs are not direct and simple. Digital channels have the potential to make transaction costs lower, routinized processes automatable, increase the reach to customers and generate information that can be used in product design and risk analysis. These channels can enhance the need to get back to the assets (ROA), equity (ROE), non-interest revenues, and cost efficiency. But the digital transformation needs investment into software, data structure, cybersecurity, expertise, and organizational reorganization. The benefits can be reaped later, subjected to inequity or compensation of the cost of implementation.

FinTech has another impact on the financial stability. Enhanced screening, fraud detection, and early-warning can be reinforced by better analytics and digital monitoring. Meanwhile, platform credit, algorithmic judgment, cyber-attacks, cloud concentration, and quick digital transfers can generate or hasten allurement. The stability implications are not specific to each bank since financial institutions are becoming more reliant on shared technology providers and cross-platform links (Financial Stability Board, 2017, 2019; Basel Committee on Banking Supervision, 2021).

Some previous studies tend to study the profitability of banks, FinTech competition, financial inclusion, or stability individually. Trade-offs can be obscured by this separation. Or as an example, a digital strategy could enhance efficiency and add reliance on an imperative cloud provider; or competition could extract margins and promote superior service and risk-management measures. The combination of streams can be helped with a hybrid review to find the situations that can explain mixed outcomes.

The review answers three research questions: (1) what does the literature tell about the relationship between FinTech and financial performance? (2) What is the effect that FinTech has on bank risk-taking and financial stability? (3) What are some of the institutional, organizational and market factors that influence these relationships and offer directions to upcoming research?

The paper is structured in such a way that it shares arguments with hybrid reviews where there are bibliographic analysis and content analysis. Section 2 describes the methodology of the review and data extraction logic. Section 3 explains the bibliographic and thematic organization of the evidence. The text in section 4 explores three thematic clusters and also gives a reference table of the cluster. Section 5 builds on an organizational itch, and ends up with extensions and future research directions.

Conceptual foundations

Resource-based view justifies the fact that digital infrastructure, data resources, analytics skills, and routines that are technologically facilitated can generate competitive advantage when they are valuable and strategically applied (Barney, 1991). Dynamic capabilities build upon that argument by putting an emphasis on the capability of sensing change in technology, grasping opportunities and reconfiguring organizational resource (Teece et al., 1997). These views imply that the performance impact arising out of FinTech lies not alone at the level of the availability of technology but also at the capacity of the institution to incorporate technology in core processes.

The entry of non-bank providers and platform-based business models is a type of innovation readily explained in terms of disruptive innovation and financial intermediation. FinTech companies can triage and break payments, lending, wealth management, and other tasks historically carried out by banks. They can lessen information is frictions, however, they can also redistribute credit, liquidity, and operational risk to new participants (Boot, 2017; Thakor, 2020).

Theories of competition give contending anticipations. Greater rivalry might decrease market strength and margins, yet can also enhance effectiveness and discipline risk-taking. It thus warns of presuming one direction of effect in the competition- fragility and competition- stability argument (Boyd and De NicolO, 2005; Beck et al., 2013).

Adaptation by customers and institutions are explained by the technology acceptance and diffusion theories. Perceived usefulness, ease of use, trust, compatibility, and conditions that facilitate the use of digital financial services affects the adoption of these services (Davis, 1989; Rogers, 2003; Venkatesh et al., 2003). Adoption is not an equal of value creation, though: the volume of transaction or app use should be associated with costs, revenue, and risk and customer outcomes.

Review contribution

The contribution of the review is that it brings both the performance and stability within one system of analysis. It approaches FinTech as a collection of capabilities and alterations in the market that works via four major mechanisms, namely, operational effectiveness, innovation and revenue diversification, information and risk evaluation, and competition and the market structure. Governance, institutional quality, regulatory design, and operational resilience condition these mechanisms.

Methodology

Hybrid literature review design

This review takes the hybrid literature review design, which integrates systematic search protocol, logic of bibliographic analysis and content analysis that is qualitative in nature. The format is that of hybrid reviews which aim to derive the intellectual architecture of a research domain and then derive the substantive sense of its themes. Bibliographic coupling has the ability to locate documents, which have common references and keyword co-occurrence is used to notice common recurrent concepts and relationships. Research questions, methods, theoretical perspectives, and findings are then analyzed with the help of qualitative content analysis (Nawaz, I., & Lyu, R. 2026).

The present paper will be structured based on three evidence clusters that were created as a result of thematic coding of the literature. It does not state that a Scopus or Web of Science bibliometric export, VOSviewer network or Bibliometrics output has been run on this version. In this regard, there are no created database hits, aggregate world citation indicators, cluster network statistics, and keywords.

Data sources and search strategy

A reproducible search should be conducted in Scopus and Web of Science Core Collection, with supplementary backward and forward citation tracking through Google Scholar. Policy material from the Financial Stability Board, Basel Committee on Banking Supervision, Bank for International Settlements, International Monetary Fund, and World Bank may be used to contextualise regulatory and systemic-risk issues. The search should cover titles, abstracts, and author keywords and should be updated immediately before submission.

Search element	Search terms / specification
FinTech concept	FinTech OR 'financial technology' OR 'digital banking' OR 'mobile payment*' OR 'digital payment*' OR 'platform lending' OR 'peer-to-peer lending' OR blockchain OR 'artificial intelligence' OR 'big data' OR 'open banking'
Financial outcomes	'financial performance' OR profitability OR efficiency OR 'bank performance' OR ROA OR ROE OR 'cost-to-income' OR 'market performance'
Stability outcomes	'financial stability' OR 'bank stability' OR 'risk-taking' OR 'systemic risk' OR resilience OR 'credit risk' OR liquidity OR 'operational risk'
Combined Boolean string	(FinTech OR 'financial technology' OR 'digital banking' OR 'mobile payment*' OR blockchain OR 'artificial intelligence' OR 'open banking') AND (bank* OR 'financial institution*' OR 'financial system') AND (profitability OR performance OR efficiency OR stability OR risk OR resilience)
Coverage	Peer-reviewed journal literature; English language; foundational and current work; database search date to be recorded at execution.

Eligibility and selection criteria

Studies are eligible when they examine a financial technology, digital financial innovation, FinTech firm, or technology-enabled financial intermediary and relate it to financial performance, risk, financial stability, inclusion, or the structure of financial intermediation. Empirical studies, conceptual papers, systematic reviews, and authoritative policy publications are retained where they make a direct contribution to the research questions.

Inclusion criteria	Exclusion criteria
Peer-reviewed journal articles and authoritative policy reports	News reports, blogs, editorials, and unsupported opinion pieces
Studies linking FinTech/digital finance to performance, risk, stability, or intermediation	Technology papers without a financial-sector outcome

Empirical, conceptual, bibliometric, or systematic review designs	Studies with no identifiable relationship to the review questions
English-language full-text or sufficiently detailed scholarly records	Duplicate records and inaccessible records with insufficient bibliographic information
Foundational theory and regulatory work relevant to the mechanisms	Unrelated domains such as medicine, physics, or engineering

Data extraction and coding

Extracting record Each of the included studies should include the author and year of publication, publication outlet, country or region, institutional setting, FinTech construct, outcome variables, sample and period, research design, method of estimation, theoretical perspective, main findings, limitations, and future research opportunities. The three thematic clusters should code studies based on their contribution that is predominant. In a study where the study is across a combination of more than a theme, the main authorship of the study will be the main contributor and cross links will be identified in the narration.

Thematic coding should be checked for consistency by a second reviewer. The disagreements ought to be talked over and the coding definitions narrowed down. A screening log cannot destroy the amount of record reached, duplicates eliminated, titles and abstracts screened, full text reviewed and causes of exclusion. The inserted PRISMA flow counts must be added once the search and screening exercise is noted and real.

Synthesis approach

Because studies use different FinTech proxies, samples, outcomes, and estimators, a narrative synthesis is more appropriate than pooling effect sizes without a defensible basis for comparability. The review compares the direction and interpretation of findings while considering measurement validity, endogeneity, self-selection, sample composition, and institutional context.

Digital banking and payments

The most apparent adoption of FinTech in incumbent institutions is digital banking. It encompasses internet banking, mobile apps, online-onboarding, electronic know-your-customer procedures, and cardless payments and combined customer-service services. Its performance implications are due to channel substitution, the availability of services and the ability to handle increased volumes of transaction volumes without similar growths in resources based on branches. Nevertheless, the migration of channels is not always associated with the cost reduction in the present moment. Banks need to have parallel legacy and online systems, assist customers who need assisted services, and invest into fraud prevention and customer authentication. The net benefit will be determined by the rate of migration, adoption by customers, the complexity of transactions and how well the back-office processes are reengineered.

Online payments have the potential of enhancing financial outcomes such as transactions volume, interchange or service revenue, retention and creating cross-selling data. They can also minimize cash-handling expenses and settlement frictions. However, the scale of payments is not a good criteria to judge profitability: competition based on pricing, regulation of the exchanges, subsidies offered by merchants, reimbursement of frauds and charges imposed by technology providers can decrease margins. Researchers ought to thus distinguish between gross transaction values, net revenue, contribution margin and cost per transaction. This is especially significant in markets in which temporary waiver of fees or promotional prices are being offered by the payment providers in attracting customers.

The effect of digitalization of payments on stability is also dual. Quick payments with traceability can enhance transparency and decrease some types of settlement and operational risk. On the other hand, the risks of concentrating the payment processing in a few networks or technology providers can put them on a single point of default. The deposit withdrawals may also be faster through the digital channels in times of uncertainty. An effective research design would be the integration of the bank level deposit-flow information and the high-frequency payment outages, cyber-attacks, and switching to different customers. This kind of work might challenge the idea that digital access enhances normal liquidity management, but makes stress-period outflows faster.

Digitalization of the front-office and that of the core-system must also be differentiated in the literature. Fragmented databases, manual reconciliation and outdated lending systems can co-exist with a polished mobile application. The previous has the ability to enhance customer experience without a significant alteration in cost structures or risk controls. The latter can produce higher

productivity but have a higher implementation and migration risk. Research must plan measurement of integration across front office, middle office and back office, as opposed to simply focusing on the presence of a mobile application or a web site.

AI, data analytics and digital lending

Financial decision-making can be enhanced by artificial intelligence and sophisticated analytics to work with large amounts of structured and unstructured data. Alternative data in credit markets could assist in evaluating applicants who have poor credit histories. Nonlinear patterns may be detected by machine-learning models, which may help forecast risk and the support of early-warning systems. Anomaly detection can be used in fraud and compliance to detect suspicious transactions and minimize the amount of work done by manual investigation. These applications have realistic paths by which FinTech can enhance their performance and stability, although the achieved impacts are contingent on data representativeness, model validation, governance and Human oversight.

There are privacy, consent, discrimination and data portability concerns associated with the utilization of alternative data. A model can accurately predict repayment based on variables that yield unfair results or that are a proxy of some defended features. Past exclusion can be encoded by historical data whereas the economic conditions can shift fast leading to model drift. An efficient model when operating under normal circumstances can collapse in case of a crisis when borrower behavior, patterns of payments or macroeconomic relations are altered. This means that model performance is to be tested over time, customer groups and stress levels. Central controls are explain ability, independent validation, challenger models and documented override procedures.

Digital lending and peer-to-peer services have the potential to lower search and processing fees and match lenders with other funding options. Bank lending can be supplemented by platforms serving small loans or underserved customers, and even be replaced by bank credit in some segments. The division of creation of origin, funding, servicing and risk ownership, may complicate the identification of the party incurring losses when loans become problematic. When the platforms depend on short-term investor capital to finance longer-term assets, liquidity and rollover risks can be experienced. Prudential analysis must thus chart out the entire lending chain instead of considering the platform to be a technology neutral intermediary.

Empirical studies in future need to rely on loan-level data to relate the implementation of automated underwriting with approval rates, pricing, delinquency, loss given default and recovery. It must also differentiate model adoption and model quality and determine the existence of benefits after conditioning on borrower selection. In cases where platforms exchange data or models, researchers have the ability to analyze whether similar scoring mechanisms produce correlated credit allocation, and enhance cyclical lending behavior. These questions make a connection between micro-level credit performance and macro-level resilience.

Blockchain, open banking and platform ecosystems

Distributed Ledger Technology is also often popularized as a tool to enhance settlement, reconciliation, tracing and transfer of assets. The possible advantages are common records, less reconciliation in between counterparties and programmable terms of transactions. However, the business case is based on how the network is governed, legal status of digital records, the interoperability, transaction throughput, privacy and the infrastructure costs. The integration of blockchain use cannot be supposed to lead to a decrease in costs in all contexts; in a permissioned shared database, it might be more cost-effective with trust in participants, and decentralization does not bring any appreciable value.

Customers can be empowered to share financial information with third-party providers with the help of open banking and application programming interfaces. It can help aggregate accounts even initiate payments, as well as manage personal finances and offer more customized credit products. In the case of banks, open banking may provide both partnership opportunities and new distribution channels, but also undermine proprietary control of relationships with customers. Platform operator bargaining power, interoperability, and access to data determine the competitive impact which is influenced by the data access rules, customer consent, switching costs, interoperability, and access to data. The same configurations may expose operational and privacy when data traverse between several institutions.

Platform ecosystems generate value through an interrelationship of customers, banks, merchants, payment providers, software providers and data intermediaries. The benefits of network effects can be both to facilitate convenience and reduce search costs, although it can also have the detrimental effect of creating concentrated market power in the hands of few platforms. When a critical infrastructure becomes challenging to replace, a common cloud infrastructure is used, or when the operational incidents spread to other firms, financial stability issues are caused. The unit of analysis of interest is thus not necessarily the bank: it can be the network of firms and providers around a critical financial service.

The studies of these technologies must not adopt adoption as a dichotomy. Measures that are handy are the percentage of transactions conducted using interoperable APIs, the percentage of critical workloads that are offered by external vendors, vendor concentration, the service-level performance, outage rates, recovery times, and provider substitutability. These operational metrics may be associated with profitability, customer outcomes and resilience. Actionable evidence would be gained through such designs rather than extensive digital transformation indices.

Measurement framework and operationalization

One of the biggest sources of variations in the literature is that various proxies are used regarding FinTech and its outcomes. Researchers are supposed to indicate whether the construct reflects inputs into technology, organizational capability, actual usage or production or development by an ecosystem. The dimensions are related yet conceptually different. IT spending is an input; the rate of customers utilizing digital channels is adoption; patents could be an output of innovation and composite index could reflect the more general enabling environment. Saturating them together may compromise construct validity and yield hard to interpret coefficients.

Coherent accounting, efficiency and market indicators ought to be used to measure financial performance. ROA represents the earnings in relation to assets whereas ROE mechanisms represent the returns to the shareholders and is also leverage sensitive. The profit model of the spread is referred to as five-percent net interest margin, whereas the non-interest income shows diversification. Cost-to-income ratios offer a stingy view of operating efficiency even though variations in accounting and business mix may compromise comparability. Efficiency can be estimated based on a frontier with data envelopment analysis and stochastic frontier models, although the analyses are sensitive to the choice of inputs or outputs and model assumptions. Q and market returns identified by Tobin represent the expectations and valuation, but not the actual operating performance.

A portfolio of indicators is also needed in terms of financial stability. The bank Z-score is an amalgamation of profitability, capitalization and volatility to model proximity to insolvency. Buffers are determined by non-performing loan ratios that reflect asset-quality undermining, and capital adequacy and liquidity ratios represent buffers. E.r.p.t. market-based measures are able to reflect anticipated default risk and volatility. Systemic measures such as share of systemic risk and network centrality reflect externality that could be overlooked by bank-level ratios. No precise measure is enough and explanations should be given by researchers concerning conceptual meaning and limitations of each measure.

Quality assessment and synthesis robustness

A systematic review should assess not only what studies conclude but also how confidently their conclusions can be interpreted. Evidence based on studies on transparent samples, validated measures, proper controls and plausible identification strategies is stronger evidence compared to descriptive correlations. The fact that there are robustness checks is beneficial but does not counteract an unsound definition of a construct or an implausible identification strategy. The reviewers would need to differentiate statistical significance and economic significance and whether the given effect is economically significant to the bank administration or prudential policy.

External validity is another concern. Results of big Chinese commercial banks might fail to be transferred directly to the small rural banks or the Islamic banks or credit unions or institutions in the countries with a lower digital infrastructure. Analyses of FinTech companies might index competitive stress slightly differently to those of internal technology investment by banks. Effects direction can also shift with time maturation of the technology; the evolution of regulations and change of customer behavior. Overviews are not to divide the institutional and the type of technology and then place all studies in one homogenous group.

Strong synthesis can be based on sensitivity groups: internal bank digitalization versus external FinTech entry; developed and emerging markets; conventional and Islamic banks; large and small institutions; and performance and stability results. It can also make comparisons across studies that utilize accounting outcomes versus those using efficiency or market measures. On conflicts discovered in findings, the review must look at the variations in construct measurement, sample period, institutional context and the estimation strategy and decide that evidence is inconsistent.

A conditional conclusion is the best that can be made as far as the current review is concerned: FinTech can help drive financial performance and stability; however, this does not mean that positive effects are necessarily inevitable. Complementary organizational capabilities and good governance are factors that lead to benefits, and design of business models, data and technology dependencies, market incentives and regulatory capacity are the type of factors that lead to the risks. Such conditional conclusion is more helpful than making a simple assertion that FinTech is either bad or good.

Bibliographic and thematic structure of the literature

Initial profile of the evidence

The literature spans bank-level digitalisation, FinTech firm entry, mobile and electronic payments, digital lending, AI-based analytics, blockchain, open banking, and technology infrastructure. Research outcomes include profitability, operating efficiency, competition, credit risk, liquidity, financial stability, and inclusion. A substantial part of the empirical evidence examines Asian banking systems, while cross-country and policy research considers broader changes in financial intermediation.

A descriptive profile should be generated from the final Scopus/Web of Science export. Recommended indicators include annual publication production, most active journals, leading authors, country affiliations, document types, citation impact, and keyword frequency. These indicators are not reproduced as numerical results here because the underlying bibliographic export was not supplied.

Bibliographic coupling and intellectual structure

Bibliographic coupling groups studies that cite a common body of literature and can therefore reveal related research conversations. In a completed analysis, the exported records should be imported into Bibliometrix or VOSviewer, with thresholds and counting methods reported transparently. The resulting clusters should be interpreted in conjunction with the content of the papers rather than treated as self-explanatory statistical categories.

For the present synthesis, three substantive clusters organise the research: (1) FinTech and financial performance/competitive dynamics; (2) FinTech and bank risk-taking/financial stability; and (3) digital innovation, inclusion, and transformation of financial intermediation. These are thematic synthesis clusters, not claimed software-generated bibliometric clusters.

Keyword co-occurrence and thematic development

The keyword structure of this field is expected to connect terms such as FinTech, digital banking, bank performance, profitability, financial stability, risk-taking, financial inclusion, digital lending, artificial intelligence, and regulation. A keyword co-occurrence map can help distinguish the performance-oriented conversation from the stability-oriented conversation and identify bridging themes such as governance, data analytics, operational resilience, and competition.

The conceptual significance of the three clusters is that FinTech affects both the internal economics of financial institutions and the wider architecture of financial markets. The first cluster is primarily concerned with firm-level outcomes; the second with risk and resilience; and the third with technology-enabled changes in access, business models, and regulatory boundaries.

Content analysis and discussion of thematic clusters

Cluster 1 FinTech, bank financial performance, and competitive dynamics

The first cluster examines how FinTech adoption and the entry of technology-based financial firms influence bank profitability, operating efficiency, market position, and innovation. Digital channels can reduce transaction costs and increase service reach, while data analytics may improve product targeting and credit decisions. At the same time, FinTech entrants can compete with incumbent banks in payments, lending, and other fee-generating services, placing pressure on margins and customer relationships.

Phan et al. (2020), using a sample of 41 Indonesian banks, report that the growth of FinTech firms negatively influences bank performance, with the result supported by additional sensitivity and robustness tests. This finding illustrates the competitive-displacement channel: FinTech firms may capture customers and revenue from traditional banks before incumbents fully adapt. By contrast, other work emphasises the potential for banks to develop their own platforms or collaborate with start-ups, suggesting that competition and complementarity can coexist.

Chen et al. (2019) analyse FinTech innovation using patent filings from 2003 to 2017 and machine-learning techniques to classify innovations. Their results indicate that the value of innovation varies by technology and that incumbent financial firms investing in their own innovation may mitigate some adverse effects associated with disruptive entrants. This supports the argument that technological capability and strategic response shape performance outcomes.

The cluster also includes research on the interaction between digitalisation, bank concentration, and profitability, including evidence from Chinese urban commercial banks (Li et al., 2023), as well as comparative work on Islamic and conventional banks

in the MENA region (Kharrat et al., 2023). The main implication is that the FinTech–performance relationship is not uniform: it depends on the business model, institutional setting, competitive structure, and the timing of technology investment.

Table 3. Summary of Cluster 1FinTech, bank financial performance, and competitive dynamics

Stream	Authors / outlet	Analysis type	Method / evidence	Theory / lens	Main outcome
a. FinTech entry and bank performance	Phan et al. (2020), Pacific-Basin Finance Journal	Quantitative	41 Indonesian banks; bank-level empirical analysis; robustness and alternative estimators	Competition / financial intermediation lens; no single theory asserted here	FinTech firm growth negatively predicts bank performance in the Indonesian sample.
b. Value of FinTech innovation	Chen et al. (2019), Review of Financial Studies	Quantitative	Patent filings (2003–2017); machine-learning classification and innovation-value analysis	Innovation and market-value perspective	Innovation value differs by technology; incumbent innovation can mitigate some disruptive effects.
c. FinTech and bank concentration/profitability	Li et al. (2023), Finance Research Letters	Quantitative	Bank-level analysis of Chinese urban commercial banks	Industrial organisation / competition lens	Examines how FinTech, concentration, and profitability interact; context-specific effects.
d. Islamic and conventional bank performance	Kharrat et al. (2023), Journal of Islamic Accounting and Business Research	Comparative empirical	Comparative study of Islamic and conventional banks in the MENA region	Institutional and business-model perspective	Suggests that bank type and institutional context condition the FinTech–performance relationship.
e. Bank–FinTech interaction	Hornuf et al. (2021), Small Business Economics	Empirical / institutional analysis	Study of interactions between banks and FinTech start-ups	Collaboration and competition perspective	Bank–FinTech relations include both cooperation and competition.
f. Digitalisation and customer channels	Carbó-Valverde et al. (2020), Global Policy	Empirical / policy analysis	Bank IT investment and customer digitalisation	Technology adoption and organisational capability	Customer digitalisation depends on banks' investment and implementation choices.

Cluster 2 FinTech, bank risk-taking, and financial stability

The second cluster focuses on whether FinTech strengthens or weakens the capacity of banks and financial systems to absorb shocks. A stabilising channel arises when digital information improves screening, monitoring, fraud detection, and operational control. A destabilising channel arises when rapid credit expansion, algorithmic models, cyber incidents, third-party concentration, or digital liquidity movements increase exposure to shocks.

Safiullah and Paramati (2022) provide direct evidence on the relationship between FinTech firms and bank financial stability in Malaysia. Their sample comprises 26 Islamic and conventional banks over 2003–2018, with 301 bank-year observations. The authors use pooled OLS as a baseline and dynamic panel GMM to address unobserved heterogeneity, simultaneity, and dynamic endogeneity. They report that the development of FinTech firms increases bank financial stability, with results robust across bank size, bank type, governance subsamples, and alternative measures.

Wang et al. (2021) examine FinTech development and bank risk-taking in China, highlighting that the relationship between technology development and risk incentives is an important empirical question. The Financial Stability Board (2017, 2019) and Basel Committee on Banking Supervision (2021) identify broader supervisory concerns, including operational resilience, third-party dependencies, cyber risk, and changes in market structure. These policy analyses show why bank-level profitability or Z-scores alone may not capture systemic vulnerabilities.

The cluster suggests that financial stability effects depend on the interaction between technology and governance. Digital tools may improve monitoring, but they can also create model opacity, common dependencies, and rapid transmission channels. Studies should therefore distinguish bank-level solvency from system-wide resilience and include measures of liquidity, cyber exposure, concentration, and interconnectedness.

Table 4. Summary of Cluster 2 FinTech, bank risk-taking, and financial stability

Stream	Authors / outlet	Analysis type	Method / evidence	Theory / lens	Main outcome
a. FinTech firms and bank stability	Safiullah & Paramati (2022/2024), Electronic Commerce Research	Quantitative	26 Malaysian banks; 2003–2018; pooled OLS and dynamic panel GMM; Z-score and robustness measures	Bank competition, governance and financial stability perspective	FinTech firm development is associated with higher bank financial stability in the sample.
b. FinTech development and risk-taking	Wang et al. (2021), The European Journal of Finance	Quantitative	China-focused bank-level empirical analysis	Risk-taking and banking competition perspective	Examines how FinTech development changes bank risk-taking incentives.
c. FinTech credit markets	Claessens et al. (2018), BIS Quarterly Review	Cross-country descriptive analysis	FinTech credit market size, drivers, and policy issues across countries	Financial intermediation perspective	FinTech credit is a growing form of intermediation with implications for regulation and risk.
d. Financial stability implications	Financial Stability Board (2017)	Policy / conceptual analysis	Supervisory and regulatory assessment of FinTech developments	Macroprudential and supervisory perspective	Identifies risks requiring attention from financial authorities.
e. Market structure and stability	Financial Stability Board (2019)	Policy / market analysis	Assessment of FinTech and financial-services market structure	Systemic-risk and market-structure perspective	Highlights potential stability implications arising from changing market structure.

f. Operational resilience	Basel Committee (2021)	Principles / policy framework	Principles for operational resilience in banks	Operational risk and resilience framework	Emphasises resilience, critical operations, and the ability to respond to disruptions.

Cluster 3 Digital innovation, financial inclusion, and transformation of financial intermediation

The third cluster covers the wider transformation of financial services through digital payments, mobile finance, AI, big data, blockchain, open banking, and platform ecosystems. These innovations can reduce access barriers, expand service availability, and change the boundaries between banks and non-bank providers. The cluster therefore connects institution-level performance with customer outcomes and system architecture.

Murinde et al. (2022) review the FinTech revolution and its implications for the future of banking. Their analysis combines a review of the literature with bank-level indicators from 115 countries over 16 years. They conclude that FinTech lenders are unlikely simply to replace banks, partly because banks are developing their own platforms and collaborating with FinTech start-ups. The study also emphasises the importance of regulation, global infrastructure, and geopolitical conditions.

Gomber et al. (2018) provide a broad interpretation of the FinTech revolution, highlighting innovation, disruption, and transformation in financial services. Thakor (2020) reviews what is known about FinTech and banking, while Frost et al. (2019) examine BigTech and the changing structure of financial intermediation. Together, these contributions suggest that digital finance is not merely a new delivery channel; it changes the allocation of information, customer relationships, and the role of non-bank platforms.

Financial inclusion is an important development dimension. Mobile payments and digital accounts can broaden access, but access alone does not guarantee meaningful use, affordability, or consumer protection. Data privacy, digital literacy, fraud, interoperability, and complaint resolution remain important conditions. The same digital infrastructure that expands inclusion can create concentration and operational risks if critical services depend on a small number of providers.

Table 5. Summary of Cluster 3 Digital innovation, inclusion, and transformation of financial intermediation

Stream	Authors / outlet	Analysis type	Method / evidence	Theory / lens	Main outcome
a. FinTech and future banking	Murinde et al. (2022), International Review of Financial Analysis	Hybrid review and empirical description	Literature review plus bank-level indicators from 115 countries over 16 years	Financial intermediation and institutional change	Banks are likely to adapt through internal platforms and partnerships rather than be fully replaced by FinTech lenders.
b. FinTech revolution and transformation	Gomber et al. (2018), Journal of Management Information Systems	Conceptual review	Synthesis of innovation, disruption, and transformation in financial services	Innovation and disruptive change	FinTech is a broad transformation of financial services, not a single technology.
c. FinTech and banking knowledge	Thakor (2020), Journal of Financial Intermediation	Literature review	Review of research on FinTech and banking	Financial intermediation theory	Identifies opportunities and unresolved questions concerning technology and banking.

d. BigTech and intermediation	Frost et al. (2019), Economic Policy	Empirical / policy analysis	Analysis of BigTech and financial intermediation structure	Platform economics and intermediation	BigTech can reshape financial intermediation through data, networks, and platform advantages.
e. Digital money and inclusion	Adrian & Mancini-Griffoli (2019), IMF	Policy / conceptual analysis	Assessment of digital money and financial services	Monetary and payment-system perspective	Digital money creates opportunities and policy challenges for payment systems.
f. Data-driven finance and regulation	Zetzsche et al. (2017), NYU Journal of Law & Business	Legal / conceptual analysis	Regulatory analysis of data-driven finance	Regulatory governance and data rights	FinTech raises new regulatory challenges around data, platforms, and financial services.

Cross-cluster synthesis

The three clusters reveal a connected but differentiated research field. Cluster 1 is concerned primarily with bank-level outcomes such as profitability, efficiency, and competitive position. Cluster 2 focuses on the risk implications of technology and the resilience of financial institutions. Cluster 3 addresses the wider transformation of intermediation, customer access, and the regulatory environment. These themes are mutually reinforcing: competition influences profitability and risk-taking; digital infrastructure affects both inclusion and operational resilience; and governance determines whether technological capability is converted into durable value.

Dimension	Cluster 1: Performance	Cluster 2: Stability	Cluster 3: Transformation
Primary unit	Bank / FinTech firm	Bank / financial system	Customer / platform / ecosystem
Main outcomes	ROA, ROE, efficiency, margins, market value	Z-score, NPLs, liquidity, operational and systemic risk	Access, usage, innovation, service quality, market structure
Potential benefits	Lower costs, new revenue, customer reach	Improved monitoring, screening, fraud detection	Inclusion, interoperability, new business models
Potential costs / risks	Implementation costs, margin compression	Cyber risk, model risk, liquidity and concentration risk	Data privacy, platform power, exclusion and regulatory gaps
Key moderators	Bank size, competition, strategy, technology capability	Capital, governance, supervisory capacity, provider concentration	Digital infrastructure, literacy, consumer protection, interoperability
Core research gap	Causal effect on risk-adjusted performance	Bank-level versus systemic stability	How ecosystem-level change affects both performance and resilience

Theoretical implications

The resource-based view and dynamic capabilities explain why digital assets and organisational integration can generate performance advantages, but they do not alone explain systemic externalities. Financial intermediation theory is necessary to understand the relocation of screening, monitoring, and maturity transformation across banks and platforms. Competition theories explain why FinTech entry can simultaneously improve efficiency and weaken margins or franchise value. Institutional and regulatory perspectives explain why the same technology may have different effects across countries.

A useful synthesis is therefore multi-theoretical. FinTech capability is an organisational resource; its performance effect depends on dynamic capabilities and strategic fit; its stability effect depends on risk governance and market structure; and its broader effects depend on institutional quality and regulatory perimeter (Nawaz, I. 2026).

Toward an integrated conceptual framework

The review proposes an integrated framework in which FinTech capability affects financial performance and financial stability through distinct but connected mechanisms. The main capability dimensions include digital infrastructure, data analytics, AI, mobile and online channels, platform partnerships, and payment technology. These capabilities influence performance through operational efficiency, revenue diversification, customer reach, and innovation. They influence stability through screening quality, monitoring, fraud detection, cyber exposure, model risk, liquidity dynamics, and third-party dependencies.

Framework component	Core elements	Expected relationship
FinTech capability	Digital banking, AI, big data, cloud, APIs, blockchain, platform finance	Enables new processes, services, and data capabilities
Performance mechanisms	Cost efficiency, productivity, revenue diversification, customer retention, innovation	Can improve profitability and market position; may involve short-term investment costs
Stability mechanisms	Credit screening, risk monitoring, fraud controls, cyber risk, liquidity, provider concentration	Can improve or weaken resilience depending on governance and system dependencies
Moderating conditions	Board technology expertise, risk culture, capital, regulatory quality, digital infrastructure	Determine whether capability translates into sustainable outcomes
Outcomes	ROA, ROE, cost-to-income, NPLs, Z-score, liquidity, operational resilience, systemic exposure	Should be assessed jointly rather than in isolated outcome models

The proposed framework also recognises feedback effects. Strong financial performance can provide resources for further technology investment, while financial stability can support confidence and adoption. Conversely, poor performance may prompt hurried digital investment, and technology failures can weaken customer trust and funding stability. These reciprocal relationships create potential endogeneity and require careful empirical identification.

Conceptually, the framework can be represented as follows: FinTech capability → (efficiency, innovation, information quality, competition) → financial performance; and FinTech capability → (risk monitoring, cyber/model exposure, liquidity dynamics, interconnectedness) → financial stability. Governance, institutional quality, and regulation moderate both pathways.

Research agenda and implications

Future research directions

Research priority	Research question	Suggested approach / measures
Causal identification	Does FinTech adoption improve risk-adjusted profitability, or do stronger banks simply adopt more technology?	Natural experiments, staggered adoption, difference-in-differences, IV strategies; ROA/ROE and Z-score
Non-linear effects	Are there thresholds or J-shaped effects as digital investment matures?	Threshold models, panel smooth-transition models, quantile regression
Systemic risk	Do shared cloud and payment providers transmit operational shocks across banks?	Network analysis, vendor concentration, outage and recovery-time data
Credit quality	Does digital lending broaden access without weakening underwriting?	Loan-level approval, pricing, arrears, default, and recovery data
Governance	Does board technology expertise moderate performance and stability outcomes?	Board composition, risk committee expertise, model governance, interaction models

Emerging markets	How do institutional quality, digital infrastructure, and consumer protection condition FinTech outcomes?	Multilevel country-bank panels and comparative case studies
AI accountability	Do explainability, validation, and human review improve model reliability?	Model audits, fairness metrics, drift testing, and stress-period performance

Managerial implications

Banks should evaluate digital projects using risk-adjusted business cases that include implementation costs, customer adoption, transaction economics, service quality, fraud losses, and operational resilience. Digital channels should be integrated with back-office redesign rather than layered onto inefficient legacy processes. Boards should oversee technology strategy, data governance, model risk, cybersecurity, and critical third-party dependencies.

Regulatory and development implications

Regulators should combine innovation-supportive policies with proportionate supervision of operational resilience, outsourcing, cyber risk, data protection, consumer redress, and non-bank credit intermediation. In emerging economies, digital identity, interoperable payment systems, reliable connectivity, and financial literacy can support inclusion, but digital expansion must be accompanied by fraud prevention and accessible complaint mechanisms.

Conclusion

This hybrid literature review examined how FinTech affects financial performance and financial stability. The three thematic clusters show that digital technologies influence the economics of financial institutions, their risk profiles, and the wider structure of financial intermediation. FinTech can improve operating efficiency, customer reach, innovation, and monitoring. However, it can also intensify competition, compress margins, increase implementation costs, and create cyber, model, liquidity, and third-party concentration risks.

The evidence does not support a universal claim that FinTech is either beneficial or harmful. Outcomes depend on the type of technology, the business model, the institution's capacity to integrate technology, governance quality, market structure, and regulatory conditions. Evidence from Indonesia indicates that FinTech firm growth can negatively affect bank performance, while evidence from Malaysia indicates that FinTech firm development can be associated with higher bank stability. These contrasting results illustrate why performance and stability should be analysed jointly and why contextual moderators matter.

The main contribution is an integrated framework connecting FinTech capability with performance and stability through efficiency, innovation, information, competition, risk governance, and operational resilience. Future research should improve measurement, address endogeneity and self-selection, broaden the range of countries and institutions studied, and examine system-wide dependencies arising from shared technology providers.

Limitations

This manuscript follows the structure of a hybrid review but does not claim a completed Scopus/Web of Science bibliometric extraction or software-generated network analysis. The final submission should include dated database exports, screening counts, bibliometric maps, and a documented coding log. The three tables are thematic evidence summaries; they are not substitutes for a verified study-level extraction dataset. In addition, the cited studies vary in context, technology measures, outcomes, and methods, limiting direct quantitative comparison.

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