Digital Credit and Its Determinants

Subjects: Business, Finance

Contributor: Tu D. Q. Le , Thanh Ngo , Dat T. Nguyen

Digital credit has gained much attention from academic researchers, practitioners, and policymakers worldwide. Digital credit models may include invoice trading, peer-to-peer and balance sheet lending, and equity crowdfunding or funding. Researchers aim to investigate the drivers of digital credit when considering the importance of money laundering and terror financing risks and to answer the research question “What are the key determinants of digital credit?”

digital credit money laundering terrorist financing innovation capacity financial development determinants

1. Introduction

The global financial system has witnessed significant transformation in past decades. Although conventional banks and financial institutions maintain a primary funding source for firms and households in most countries and the role of capital markets is critical in some cases, new digital lending platforms have recently materialized. Digital credit models may include invoice trading, peer-to-peer and balance sheet lending, and equity crowdfunding or funding (Bazarbash and Beaton 2020). These credit forms, expedited by online platforms rather than traditional lenders, are considered debt-based alternative finance (Wardrop et al. 2015), fintech credit (Claessens et al. 2018), total alternative credit when accounting for both bigtech credit and fintech credit (Cornelli et al. 2023), or marketplace lending (Bazarbash and Beaton 2020). Digital credit has attracted practitioners, academics, and policymakers as many countries have witnessed remarkable growth in digital credit (Cornelli et al. 2023); however, several authorities are relatively sceptical about promoting digital credit because of the lack of a rigorous regulatory framework (Claessens et al. 2018; Bazarbash and Beaton 2020).

The literature on digital credit can be divided into two strands. The first strand is to investigate the effect of digital credit on the conventional financial market, especially the banking sector. Several studies using firm-level and aggregated data have attempted to examine the impacts of fintech credit (e.g., peer-to-peer lending) on commercial banks’ lending (Buchak et al. 2018; Tang 2019; De Roure et al. 2021; Sheng 2021; Hodula 2021), bank efficiency or profitability (Le et al. 2021; Nguyen et al. 2021), household and firm credit (Le 2022b), economic growth (Song and Appiah-Otoo 2022), and income inequality (Hodula 2023). Meanwhile, the second strand is to examine the factors that influence the development of digital credit (Rehman et al. 2023; Hu et al. 2019; Nugraha et al. 2022).

The expansion of digital credit is broadly associated with demand and supply sides (Cornelli et al. 2023). On the demand side, the state of the economy will influence the demand for alternative credit from households and firms, especially small- and medium-sized firms (Claessens et al. 2018). When incumbent banking products and services become costly and the coverage of conventional banks is low, this may induce the growth of digital credit (Le et al. 2021). On the supply side, financial regulation and institutional characteristics may significantly affect the development of digital credit. For example, more stringent banking regulations will inhibit the penetration of fintech and bigtech firms (Le et al. 2021; Cornelli et al. 2023). Most empirical studies using cross-country data in this strand have pointed out several key determinants of fintech credit. Bazarbash and Beaton (2020) showed that higher economic development could boost digital credit because higher income per capita raises (1) borrowers' repayment capacity and (2) there is a greater supply of funding for fintech credit as any small investors can participate in lending transactions over online platforms. However, Cornelli et al. (2023) and Claessens et al. (2018) argued that the positive relationship becomes less crucial and even slightly adverse at greater levels of development. In addition, there is a consensus view that the development and quality of the financial market matter for the expansion of digital credit. Rau (2020) and Navaretti et al. (2017) indicated a positive association between crowdfunding volume and financial depth. However, several studies have demonstrated the opposite findings, and the effect of financial development may depend on different types of digital credit and components of financial development. For example, financial development has been found to have no impact on total marketplace lending (Bazarbash and Beaton 2020) or peer-to-peer lending, regardless of advanced and emerging countries (Oh and Rosenkranz 2020). More specifically, Bazarbash and Beaton (2020) highlighted that financial development positively affects consumer marketplace lending, while negatively impacting business marketplace lending. Mixed findings have also been found when observing financial development components. Nonetheless, Le (2022b) emphasized that fintech credit tends to expand more in developing countries where the level of financial development is lowered. Furthermore, it is acknowledged that information technology infrastructure is a critical prerequisite for expanding digital credit. Several studies have suggested that the growth of new digital lending is significantly affected by fixed broadband subscriptions (Oh and Rosenkranz 2020) and internet users (Bazarbash and Beaton 2020).

Along with these essential determinants, several perspectives have also been examined, such as financial literacy (Oh and Rosenkranz 2020), financial inclusion (Le 2022a; Bazarbash and Beaton 2020), the characteristics and conditions of the banking system (e.g., banking efficiency, banking concentration, a regulatory stringency for the banking sector, profitability) (Claessens et al. 2018; Cornelli et al. 2023; Le et al. 2021), and country institutional characteristics and financial crises (Cornelli et al. 2023). However, FATF (2021) reported two primary risks related to digital credit, namely money laundering (ML) and terrorist financing (TF). Several qualitative studies have also reemphasized the critical roles of anti-money laundering and terrorist financing frameworks in expanding digital credit (Allen et al. 2021; Soudijn 2019).

2. Key Determinants of Digital Credit

Several studies have concentrated on different dimensions of digital credit using micro-data levels (De Roure et al. 2016, 2021; Freedman and Jin 2017; Jagtiani and Lemieux 2019; Berg et al. 2019; Cheng and Qu 2020; Sheng 2021). However, several studies using cross-country exist (Claessens et al. 2018; Cornelli et al. 2023; Nguyen et al. 2021; Le 2022b; Le et al. 2021). We continue exploring the determinants of digital credit using aggregated data levels. Most studies in this perspective have focused on the effects of financial development and financial literacy (Oh and Rosenkranz 2020), financial inclusion (Le 2022a), economic conditions, and technological infrastructures (Bazarbash and Beaton 2020; Claessens et al. 2018; Cornelli et al. 2023), or the efficiency of the global banking system (Le et al. 2021). Additionally, recent studies have emphasized money laundering and terrorist financing risks (ML/TF) as one critical concern related to digital credit growth (Allen et al. 2021; Soudijn 2019), as well as different adoption stages of central bank digital currency (Le et al. 2023).

Most studies have provided an overall view of the anti-money laundering and terror financing (AML/TF) frameworks regarding the emergence of fintech. Schwarz et al. (2021) comprehensively explained how fintech should be subject to AML/TF measures. Akartuna et al. (2022a) additionally identified several ways fintech modernizes ML/TF methods. These studies proposed some significant recommendations for implementing a sound AML/TF framework for the growth of fintech. Sarmento and Viegas (2022), analyzing the responsibility of different entities for fighting ML/TF globally and in Portugal, suggested that new innovative solutions address the associated fintech risks in collaboration with the private sector.

All in all, empirical evidence suggests that digital credit is more developed in nations with stringent regulations on anti-money laundering and terrorist financing. More importantly, developing a rigorous legal framework is critical to promote fintech credit worldwide (Allen et al. 2021; Soudijn 2019). Anti-money laundering and terrorist financing frameworks hardly impact the growth of bigtech credit - perhaps, lending activities are not a primary focus of those firms. Furthermore, it is also suggested that innovation capacity plays a critical role in expanding all forms of digital credit. Additionally, the negative relationship between financial development and digital credit demonstrates that digital credit may not be a substitute for conventional financial systems, consistent with Cornelli et al. (2023) and Claessens et al. (2018). The same conclusions still hold for both developed and developing countries.

References

1. Bazarbash, Majid, and Kimberly Beaton. 2020. Filling the Gap: Digital Credit and Financial Inclusion. IMF Working Papers No. WP/20/150. Washington, DC: International Monetary Fund.
2. Wardrop, Robert, Bryan Zhang, Raghavendra Rau, and Mia Gray. 2015. Moving Mainstream: The European Alternative Finance Benchmarking Report. London: Cambridge Centre for Alternative Finance and EY.
3. Claessens, Stijn, Jon Frost, Grant Turner, and Feng Zhu. 2018. Fintech Credit Markets around the World: Size, Drivers and Policy Issues. BIS Quarterly Review September 2018: 1–21.

4. Cornelli, Giulio, Jon Frost, Leonardo Gambacorta, P. Raghavendra Rau, Robert Wardrop, and Tania Ziegler. 2023. Fintech and Big Tech Credit: Drivers of the Growth of Digital Lending. Journal of Banking & Finance 148: 106742.
5. Buchak, Greg, Gregor Matvos, Tomasz Piskorski, and Amit Seru. 2018. Fintech, Regulatory Arbitrage, and the Rise of Shadow Banks. Journal of Financial Economics 130: 453–83.
6. Tang, Huan. 2019. Peer-to-Peer Lenders Versus Banks: Substitutes or Complements? The Review of Financial Studies 32: 1900–38.
7. De Roure, Calebe, Loriana Pelizzon, and Anjan Thakor. 2021. P2p Lenders Versus Banks: Cream Skimming or Bottom Fishing? The Review of Corporate Finance Studies 11: 213–62.
8. Sheng, Tianxiang. 2021. The Effect of Fintech on Banks' Credit Provision to SMEs: Evidence from China. Finance Research Letters 39: 101558.
9. Hodula, Martin. 2021. Does Fintech Credit Substitute for Traditional Credit? Evidence from 78 Countries. Finance Research Letters 48: 102469.
10. Le, Tu D. Q., Tin H. Ho, Dat T. Nguyen, and Thanh Ngo. 2021. Fintech Credit and Bank Efficiency: International Evidence. International Journal of Financial Studies 9: 44.
11. Nguyen, Liem, Son Tran, and Tin Ho. 2021. Fintech Credit, Bank Regulations and Bank Performance: A Cross-Country Analysis. Asia-Pacific Journal of Business Administration 14: 445–66.
12. Le, Tu D. Q. 2022b. A Shift Towards Household Lending During Fintech Era: The Role of Financial Literacy and Credit Information Sharing. Asia-Pacific Journal of Business Administration 15: 466–85.
13. Song, Na, and Isaac Appiah-Otoo. 2022. The Impact of Fintech on Economic Growth: Evidence from China. Sustainability 14: 6211.
14. Hodula, Martin. 2023. Fintech Credit, Big Tech Credit and Income Inequality. Finance Research Letters 51: 103387.
15. Rehman, Shafiq Ur, Mustafa Al-Shaikh, Patrick Bernard Washington, Ernesto Lee, Ziheng Song, Ibrahim A. Abu-AlSondos, Maha Shehadeh, and Mahmoud Allahham. 2023. Fintech Adoption in Smes and Bank Credit Supplies: A Study on Manufacturing SMEs. Economies 11: 213.
16. Hu, Zhongqing, Shuai Ding, Shizheng Li, Luting Chen, and Shanlin Yang. 2019. Adoption Intention of Fintech Services for Bank Users: An Empirical Examination with an Extended Technology Acceptance Model. Symmetry 11: 340.
17. Nugraha, Deni Pandu, Budi Setiawan, Robert Jeyakumar Nathan, and Maria Fekete-Farkas. 2022. Fintech Adoption Drivers for Innovation for SMEs in Indonesia. Journal of Open Innovation: Technology, Market, and Complexity 8: 208.

18. Rau, P. Raghavendra. 2020. Law, Trust, and the Development of Crowdfunding. Cambridge Centre for Alternative Finance Working Paper. Cambridge: University of Cambridge.
19. Navaretti, Giorgio Barba, Giacomo Calzolari, and Alberto Franco Pozzolo. 2017. Fintech and Banking: Friends or Foes. Rome: Europeye SRL.
20. Oh, Eun Young, and Peter Rosenkranz. 2020. Determinants of Peer-to-Peer Lending Expansion: The Roles of Financial Development and Financial Literacy. Working Paper Series 613. Philippines: Asian Development Bank.
21. Le, Tu D. Q. 2022a. The Roles of Financial Inclusion and Financial Markets Development in Fintech Credit: Evidence from Developing Countries. International Journal of Blockchains and Cryptocurrencies 2: 339–49.
22. FATF. 2021. Opportunities and Challenges of New Technologies for AML/CFT. Paris: The Financial Action Task Force.
23. Allen, Franklin, Xian Gu, and Julapa Jagtiani. 2021. A Survey of Fintech Research and Policy Discussion. Review of Corporate Finance 1: 259–339.
24. Soudijn, Melvin R. J. 2019. Using Police Reports to Monitor Money Laundering Developments. Continuity and Change in 12 years of Dutch Money Laundering Crime Pattern Analyses. European Journal on Criminal Policy and Research 25: 83–97.
25. De Roure, Calebe, Loriana Pelizzon, and Paolo Tasca. 2016. How Does P2P Lending Fit into the Consumer Credit Market? Discussion Paper No 30/2016. Frankfurt: Deutsche Bundesbank.
26. Freedman, Seth, and Ginger Zhe Jin. 2017. The Information Value of Online Social Networks: Lessons from Peer-to-Peer Lending. International Journal of Industrial Organization 51: 185–222.
27. Jagtiani, Julapa, and Catharine Lemieux. 2019. The Roles of Alternative Data and Machine Learning in Fintech Lending: Evidence from the Lendingclub Consumer Platform. Financial Management 48: 1009–29.
28. Berg, Tobias, Valentin Burg, Ana Gombović, and Manju Puri. 2019. On the Rise of Fintechs: Credit Scoring Using Digital Footprints. The Review of Financial Studies 33: 2845–97.
29. Cheng, Maoyong, and Yang Qu. 2020. Does Bank Fintech Reduce Credit Risk? Evidence from China. Pacific-Basin Finance Journal 63: 101398.
30. Le, Tu, Son H. Tran, Dat T Nguyen, and Thanh Ngo. 2023. The Degrees of Central Bank Digital Currency Adoption across Countries: A Preliminary Analysis. Economics and Business Letters 12.
31. Schwarz, Nadine, Ke Chen, Francisca Fernando, and Maksym Markevych. 2021. Virtual Assets and Anti-Money Laundering and Combating the Financing of Terrorism. FinTech Notes No 2021/002. Washington, DC: International Moneytary Fund:.

32. Akartuna, Eray Arda, Shane D. Johnson, and Amy E. Thornton. 2022a. Preventing the Money Laundering and Terrorist Financing Risks of Emerging Technologies: An International Policy Delphi Study. Technological Forecasting and Social Change 179: 121632.
33. Sarmento, Carlos, and Miguel Viegas. 2022. The New Centrality of 'Fintech' in the Fight against Money Laundering, Terrorist Financing and Proliferation Financing: The Case of Portugal. International Journal of Financial Innovation in Banking 3: 133–52.