Review of: "Digitalization, Emerging Technologies, and Financial Stability: Challenges and Opportunities for the Banking Industry"

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Potential competing interests: No potential competing interests to declare.

This paper discusses the information and telecommunications technology (ICT) dynamics for the banking industry and the potential risks rising from digitization to financial stability such as blockchain technology. The author presents evidence of the technology usage such as mobile and internet in the field of payments and financial services in Indonesia and discusses the risks of crypto assets and the impact of application programming interfaces (API) on financial stability.

Although the topic itself is up-to-date and has some potential, the paper is conceptually, methodologically and theoretically deprived, and is predominantly descriptive. Moreover, the overall contribution of the paper seems to be not insightful as the topic has been extensively discussed in the academic literature.

I now would like to be more specific. Below I compile a number of more specific comments (in no order of preference).

I am concerned regarding your declared comments in the introduction. More precisely:

1. You state that you examined the impact and implications of, advances in emerging technologies in general and blockchain technology in particular on financial services delivery (banking) and financial system stability. However, you do not provide sufficient evidence in order to support this argument or you should check it again if this is true or not using potentially a statistical or an econometric methodology.
2. Secondly, Decentralised Finance (DeFi) is not discussed in the paper in terms of developments of new technological financial products such as tokenization, smart contracts and customer identification.
3. In order to underscore the importance that the ICT revolution and digitization have played in deepening financial development and financial inclusion, you should examine this relationship in a more detailed manner in order to conclude on this statement.
4. Considering crypto assets and financial stability you should investigate the interconnection between crypto asset markets and the traditional financial markets and also you should refer to the extended period of trouble in crypto market, in other words the so called crypto winter and the potential implications for financial stability.
5. As regards CBDCs, it is not clear the linkage between blockchain technology and CBDCs. For instance, the Bank for International Settlements (BIS) Innovation Hub explores via Project mBridge the cross-border payments using a custom-built common platform based on distributed ledger technology (DLT) upon which multiple central banks can issue and exchange their respective central bank digital currencies (multi-CBDCs.
6. Turning now to APIs and financial stability, you should explain why traditional banks face threat from online and mobile

banking start ups. An empirical study of the rise of Fintech companies and a statistical comparison between the traditional banks' financial services and the Fintech companies' financial services and products could be useful.

7. The literature review part should be improved, which does not underline the contribution of this paper. The authors also miss many valuable references such as:

Bank of England. (2021). New forms of digital money.

Barber, M., & Odean, T. (2001). The Internet and the Investor. Journal of Economic Perspectives, 15(1), 41–54.

Bech, M., & Garratt, R. (2017). Central bank cryptocurrencies. BIS. Quarterly Review, 2017, 1

Brunnermeier, M.K., James, H., Landau, J.P. (2019). The digitalization of money. In NBER Working Paper No. 26300.

Bullmann, D., Klemm, J., & Pinna, A. (2019). In search for stability in crypto-assets: are stablecoins the solution? Occasional Paper Series, 230, 8.

Carter, N., Jeng, L. (2021). DeFi Protocol Risks: The Paradox of DeFi. https://papers.ssrn.com/sol3/ papers.cfm? abstract_id=3866705.

ECB. (2020c). Report on a digital euro.

Forman, C., Goldfarb, A., & Greenstein, S. (2008). Understanding the inputs into innovation: Do cities substitute for internal firm resources? Journal of Economics and Management Strategy, 17(2), 295–316.

Goldfarb, A., & Tucker, C. (2019). Digital Economics. Journal of Economic Literature, 57(1), 3–43.

Mita, M., Ito, K., Ohsawa, S., Tanaka, H. (2019). What is stablecoin?: A survey on price stabilization mechanisms for decentralized payment systems.

Nambisan, S., Wright, S., & Feldman, M. (2019). The digital transformation of innovation and entrepreneurship: Progress, challenges and key themes. Research Policy, 48, 8.

Sandner, P., Schulden, P., Grale, L., Groß, J. (2020). The Digital Programmable Euro, Libra and CBDC: Implications for European Banks. In Conference: EBA Policy Research Workshop: New technologies in the banking sector—impacts, risks, and opportunities.

In a nutshell, the marginal contribution of this paper is minor, only describing the main developments of digitization in the financial sector and discussing potential challenges for the banking industry.