

History and prospects of digital finance

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Evolution of the international regulatory framework on digital finance



An abstract graphic on the left side of the slide, featuring a series of curved, parallel lines that create a sense of depth and movement, resembling a stylized wave or a tunnel effect. The lines are dark and set against a lighter background, with a bright light source at the bottom left creating a glow.

Framing the issue

- Why is regulation important for financial services?
- Why is it an issue for Fintech?

Aims of regulation

Table 13–1 Areas of CB Specialness In Regulation

Safety and soundness regulation—layers of regulation have been imposed on CBs to protect depositors and borrowers against the risk of failure.

Monetary policy regulation—regulators control and implement monetary policy by requiring minimum levels of cash reserves to be held against commercial bank deposits.

Credit allocation regulation—regulations support the CB's lending to socially important sectors such as housing and farming.

Consumer protection regulation—regulations are imposed to prevent the CB from discriminating unfairly in lending.

Investor protection regulation—laws protect investors who directly purchase securities and/or indirectly purchase securities by investing in mutual or pension funds managed directly or indirectly by CBs (as well as other FIs).

Entry and chartering regulation—entry and activity regulations limit the number of CBs in any given financial services sector, thus impacting the charter values of CBs operating in that sector.

Policy concerns

- Concerns of policymakers arise not because of the technology
- BUT because the financial services and products are offered by **new unregulated companies and/or in unregulated spaces**
- Eg. P2P lending
- Initial international guidance came from BIS (Bank for International Settlements) and FSB (Financial Stability Board).



A Fintech regulation?

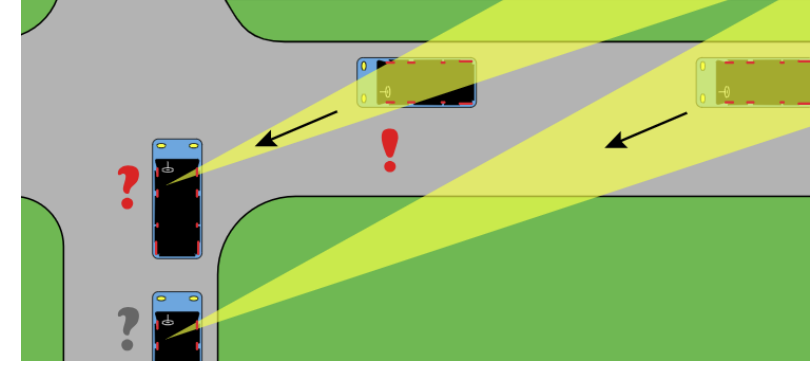
Not really

- Regulation and supervision are performed according to different models, e.g.:
 - Risk- or product-based
 - Institution based
- Emerging FinTechs at the beginning often had limited operational history
 - Hard to assess risk management, liquidity, and profitability
 - Challenges in identifying regulatory obligations and licenses
- Early-stage companies generally posed low prudential and consumer risk for regulators
 - Rapid growth can create “risk blind spots”
 - Frequent failures or fraud may undermine market and investor confidence



Picture taken from the internet

Examples of blind spots



- Kenya (2008): In three years M-pesa was being used by over 18 million customers and 43% of Kenya's GDP was flowing thru this service
- China (2014): Third party mobile payment market reached 1,433 trillion yuan, a +400% increase compared to 278 trillion exchanged in 2013
- China (2014): Yu'e Bao, a money market fund part of Ant Financial Group (Alibaba) held over US\$ 90billion (e.g. 4th largest in the world) just 10 months after its creation

Examples of new risks

- 2P platform capital buffers during credit cycle change or interest rate liberalisation
 - 2.5% deposits vs 15% P2P lenders (e.g. warning over 1,250 platforms in China)
- Money Market Fund (MMF) maturity mismatch enhanced by technology
 - Technology facilitation of on-demand redemptions (e.g. “mobile app bank run”)
- Liquidity problems for mobile money agents to meet large withdrawal requests
 - Can undermine public confidence, but also slows scalability of the solution
- Scalability of process, policies and risk management frameworks
 - Particularly for companies with exponential growth (e.g. loan origination quality)





Regulating Fintech

- Rapid technological change requires dynamic and adaptive regulatory approaches
- Global regulatory frameworks aim at balancing innovation with consumer protection
- [EU Crowdfunding and SME Finance Regulations](#)
- [ESMA Markets in Crypto-Assets Regulation \(MiCA\)](#)
- Core protocols: Know Your Customer (KYC) & Anti-Money Laundering (AML) broadly implemented across jurisdictions (Zetzsche et al., 2018)
 - EU GDPR
 - EU AML Directives and AMLA Authority
- International focus on **consumer protection** in digital finance, including clear disclosure requirements.

A graphic with a dark blue background featuring various glowing icons such as gears, a lightbulb, and bar charts. The word "RegTech" is prominently displayed in a bright blue, sans-serif font in the center-left area.

RegTech

- Recent rise of RegTech and adaptive frameworks (e.g., regulatory sandboxes) reflects regulators' efforts to keep pace with rapid FinTech developments
- Creation of regulatory sandboxes and/or innovation hubs in many jurisdictions like the UK, Singapore, and EU member states.

References

- Arner, D. W., Barberis, J., & Buckley, R. P. (2015). The evolution of Fintech: A new post-crisis paradigm. *Geo. J. Int'l L.*, 47, 1271.
- IOSCO (2023). Policy Recommendations for Crypto and Digital Asset Markets Final Report. <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD747.pdf>
- Nanda, A. S. (2024). Harnessing RegTech for Financial Inclusion: Enhancing Compliance and Security in the Modern Financial Landscape. *International Journal of Finance*, 9(5), 71- 84.
- Saunders, A., Cornett, M. M., & Erhemjamts, O. (2024 release). *Financial markets and institutions*. Boston: McGraw-Hill/Irwin.
- Zetsche, D. A., Buckley, R. P., Arner, D. W., & Barberis, J. N. (2018). From FinTech to TechFin: The regulatory challenges of data-driven finance. *New York University Journal of Law & Business*, 14(2), 393-446.

Selected Websites

- <https://www.imf.org/en/topics/digital-payments-and-finance>
- <https://www.fsb.org/work-of-the-fsb/financial-innovation-and-structural-change/financial-innovation/>
- <https://www.esma.europa.eu/esmas-activities/digital-finance-and-innovation>
- <https://www.bis.org/topic/fintech.htm>