

**Nicole Smith**

University of Bologna, Italy  
nicole.smith3@studio.unibo.it  
ORCID ID: 0009-0005-3338-9221

## **How Do Anti-Money Laundering Laws Affect the Growth of Fintech Lending Platforms in Europe?**

**Abstract:** The aim of this study is to explore the effects of anti-money laundering (AML) legislation on fintech lending platforms in the European context, focusing on the balance between protecting market integrity and safeguarding the expansion of innovation in the financial field, a tension that is encapsulated by the innovation trilemma. By analysing the current state of fintech lending and the evolving anti-money laundering regulatory landscape in Europe, the paper investigates how rigid compliance requirements can unintentionally suppress innovation. Furthermore, it discusses how these challenges can be overcome and assesses potential solutions, such as regulatory sandboxes and innovation hubs. The study concludes that AML rules are essential to strengthen financial stability; however, a more harmonized and technologically adaptive regulatory approach is necessary to promote innovation without compromising risk mitigation. Strengthening international cooperation and taking advantage of digital regulatory tools could be key in determining the future of fintech compliance and sustainable growth.

**Keywords:** fintech lending, EU AML laws, financial supervision, legal compliance

### **Introduction**

The rapid growth of financial technology (fintech) has dramatically transformed the financial landscape, offering innovative solutions that increase the accessibility, efficiency, and competitiveness of financial services. Fintech lending platforms in particular have developed new ways for individuals and small businesses to access credit and avoid traditional banking systems. However, the digital nature of fintech also introduces risks, mostly concerning financial crimes such as money laundering. Given the increasing importance of these platforms, effective regulatory frameworks

are essential to ensure that financial markets remain stable, secure, and transparent (Arner et al., 2016; Kou & Lu, 2025; Wang, 2023).

This paper explores the impact of anti-money laundering (AML) laws on the growth and operations of fintech lending platforms in Europe. The research question at the core of this investigation is: 'How do AML regulations affect fintech lending platforms, and what implications do these regulatory requirements have for the platforms' growth, operations, and development?'. I specifically focus on AML laws because they directly address one of the most critical risks faced by the fintech sector. Although there are already various regulatory frameworks governing the financial sector, such as the Payment Services Directive (PSD2), they primarily concern open banking and competition, whereas fintech lenders.<sup>1</sup>

Focusing on AML laws is particularly relevant because the European Union (EU) has recently updated its AML framework in response to the rising risks associated with digital finance and cross-border transactions. This regulatory environment presents a dual challenge for fintech lenders: on the one hand, they must ensure compliance with stringent AML requirements, and on the other, they must maintain their ability to innovate and compete in the rapidly evolving financial market. This paper aims to assess how these regulations affect the ability of fintech lenders to grow and operate effectively in the European market, highlighting the complexities and trade-offs involved.

The significance of this topic lies in the balance of innovation and regulation. Fintech lending has contributed to greater financial inclusion and the diversification of credit markets; nonetheless, its rapid growth has placed fintech lenders under the scrutiny of governments and regulators. As highlighted by Berg et al. (2021), examples such as the Woolard Review on unsecured consumer lending in the UK and the Chinese government's decision to restructure Alipay demonstrate how regulatory attention intensifies with the expansion of fintech activities.<sup>2</sup> At the same time, the regulatory burden, particularly in terms of AML compliance, can create significant challenges for start-ups and scale-up, as noted by the European Banking Authority (2025), and even the careless use of innovative compliance technologies can expose firms to heightened risks of money laundering and terrorist financing. Thus understanding the implications of AML laws for this sector is pivotal for policymakers, regulators, and industry stakeholders seeking to protect innovation while ensuring market integrity and security.

---

1 The Payment Services Directive (PSD2), Directive (EU) 2015/2366 of the European Parliament, is a law that promotes payment security and innovation, and facilitates third-party access to bank accounts for new payment services.

2 The Woolard Review was published in 2021 and is a report commissioned by the UK's Financial Conduct Authority to assess the unsecured credit market. The Chinese Central Bank issued a decision on January 2023 to change Alipay, a popular payment app, to having no actual controller.

The structure of this paper is as follows: in the first section, an overview of the fintech lending environment in Europe will be provided, while in the second part, a summary of the current EU AML regulatory framework, focusing on the key directives and regulations, will be presented. The third section will discuss the challenges fintech lenders face in complying with AML laws, particularly the impact on business operations and growth, exposing the main concerns raised by the literature. The concluding section will explore potential policy recommendations to improve the regulatory environment for fintech lending platforms and will underline the importance of finding a balance between overregulation and innovation, before closing with a summary of key findings and considerations for the future development of the fintech lending sector.

## 1. Overview of fintech lending

This section provides a general overview of the fintech lending market, including its various models and the key drivers of its growth. Fintech is defined as ‘technologically enabled innovation in financial services that could result in new business models, applications, processes, or products with an associated material effect on financial markets and institutions and the provision of financial services’ (Carney, 2017). This broad definition captures the impact of fintech on traditional financial systems.

Fintech development has followed different paths globally. As described by Langley and Leyshon (2020), in the Global North fintech focuses on ‘transforming banking’; in contrast, in the Global South it aims at ‘banking the unbanked’. In Africa, the sector has converged on mobile money; in East and South Asia, there is an intertwining of African-style ‘bottom of the pyramid’ retail fintech and western-style B2B innovation. Regions such as the Middle East, West and Central Asia, and Latin America are considered to be late starters in fintech; most fintech capital raising by fintech has occurred in China, where the sector stands out in terms of its size, history, and qualitative features. Runners-up to China are the US, the UK, and a few other countries, including EU Member States such as the Netherlands, Germany, Latvia, and Estonia, in per capita fintech investment and in terms of the capital raised by fintechs (Wójcik, 2020). According to Baba et al. (2020), the extensive network of formal financial service providers in Europe is the cause of the lower penetration of certain fintech services, as well as a preference for cash in some countries, like Italy, and the heterogeneity of regulations across jurisdictions.

Fintech lending is categorized based on two key factors (Berg et al., 2021): the nature of the interaction between customer and lender, and the technology used for borrower assessment and monitoring (Giovanola, 2023). A lending process is considered fintech-driven when the entire interaction between borrower and lender occurs through digital platforms, eliminating the need for face-to-face meetings or physi-

cal documentation (Kerikmäe et al., 2019; Mazur & Ramiro Troitiño, 2024; Troitiño, 2023). This approach significantly reduces processing times, lowers operational costs, and improves the user experience, making credit more accessible and efficient. The screening and monitoring process falls under the fintech umbrella when lenders use advanced technology such as big data analytics, machine learning (ML), and artificial intelligence (AI) to improve traditional risk-assessment models. These technologies enable lenders to expand the range of data sources (e.g. digital footprints, transaction histories, and behavioural data) or extract deeper insights from existing information, leading to more accurate credit risk evaluations (Costa, 2023; Ferretti, 2022).

Since traditional banks increasingly adopt digital solutions, the distinction between fintech lenders and traditional financial institutions has become less clear. Many banks now offer fully digital loan applications and use alternative data sources to assess creditworthiness, mirroring fintech capabilities. To maintain a clear differentiation, researchers (Cornelli et al., 2020; Gopal & Schnabl, 2022; Lentini et al., 2025) often introduce additional classification criteria, for example by stipulating that fintech lenders operate independently of incumbent banks or by excluding firms that accept deposits, as deposit-taking is typically associated with traditional banking institutions.

Baba et al. (2020) identify four main business models for lending used by fintech companies:

- peer-to-peer lending;
- crowdfunding;
- the balance sheet model and the mixed model;
- and invoice trading.

Peer-to-peer (P2P) lending is the most prominent business model in Europe; it works by directly matching borrowers and investors (lenders). P2P lending emerged nearly two decades ago with the goal of democratizing financial services, enabling borrowers to access funds without the involvement of traditional financial institutions. Initially, P2P platforms served as a decentralized marketplace where individual lenders funded loans to individual borrowers, effectively bypassing banks (Suryono et al., 2019).

Crowdfunding platforms are in many aspects similar to P2P lending because they provide a digital marketplace for matching investors and entrepreneurs. Different types of crowdfunding models exist: rewards crowdfunding, where the entrepreneur grants a reward to those who financially support the launch of a business concept or service; equity crowdfunding, where the investor receives shares in a company; and real-estate crowdfunding, where the backer can acquire ownership of a property through the purchase of shares in properties (Wangchuk, 2021).

The balance sheet model entails the fintech company originating the loan and assuming the credit risk associated with it. This kind of lending is the closest to bank lending, where the fintech company obtains debt or equity funding and records the loans in its balance sheet, however without deposit funding. This model is rarely run by itself and is often combined with other models. For example, some platforms initially adopt the balance sheet model and abandon it once they have established their reputation, shifting to a marketplace model relying solely on retail or institutional investors. However, according to the Cambridge Centre for Alternative Finance (2017), a good number of platforms continue using their own balance sheet alongside retail and/or institutional investors even after gaining a reputation. Finally, invoice trading platforms are similar to P2P lending platforms, with individual invoices used as collateral for loans. The invoice is sold on the platform, and multiple investors can buy slices of it. All of the above-mentioned fintech business models share several similarities, including a high degree of automation, as previously discussed, with the use of AI and ML, and a focus on convenience and simplicity in the customer experience, with a digitally active and younger customer base.

The growth of fintech credit is driven by multiple factors, which can be broadly classified into supply-side drivers (factors influencing lending platforms) and demand-side drivers (factors influencing borrowers and investors). The Committee on the Global Financial System & Financial Stability Board (2017) has identified and listed these factors. On the supply side, the fintech credit industry has flourished thanks to technological advancements in computer power, data storage, and mobile connectivity, which have enabled the automation of lending processes. Moreover, unlike traditional banks, fintech lenders have the ability to scale, benefiting from low marginal costs and the capability to expand rapidly through digital identification and standardized contracts (Ayata, 2024; Outeda, 2024). They have also been able to fill market gaps left by banks, such as micro-business lending and other high-risk and underserved markets, which create opportunities for fintech firms to step in (Mokrá, 2023). On the demand side, the shift in consumer preferences and investor behaviour has further stimulated fintech lending. Consumers now expect high speed, convenience, and lower costs in financial services. There have also been generational shifts: digital-savvy millennials and Gen Z consumers are more likely to prefer online lending solutions compared to older generations. This preference was particularly strengthened after the 2008 financial crisis, which weakened consumer trust in traditional banks, making alternative lending platforms more attractive.<sup>3</sup> Finally, network effects are especially important in this context: the more investors join fintech platforms, the more borrowers are drawn in, creating a self-reinforcing cycle of growth.

---

3 'Millennials' refers to individuals born between approximately 1981 and 1996, while 'Gen Z' refers to those born from 1997 onwards.

Despite its rapid growth and its numerous advantages, fintech lending is not without its difficulties. Since banks have been building up their digital banking activities, there could be competition between incumbent lenders and fintech activities. However, there have also been examples of cooperation between the two, e.g. the partnership between the British arm of the Santander bank and the American fintech platform Kabbage to accelerate automated SME lending.<sup>4</sup> In addition, many fintech lending platforms have not yet experienced a full economic cycle, including major financial downturns or a recession; thus it is uncertain how they will perform during such periods of economic stress because they have not established risk-management practices and regulatory protections. In this regard, the regulatory framework surrounding them is complex and ever-changing across different jurisdictions. It is particularly relevant to understand the factors that have driven the growth of fintech lending, as they provide context for analysing how regulatory measures, particularly AML laws, impact its development and future trajectory in Europe.

## 2. Anti-money laundering (AML) regulations in Europe

As defined by the EU, money laundering is ‘the conversion of the proceeds of crime into apparently clean funds, usually via the financial system, for example by disguising the sources of the money, changing its form or moving the funds to a place where they are less likely to attract attention’ (European Union, 2015, Chapter 1, Section 1(1)(3)(a)). AML therefore refers to the set of laws, regulations, and procedures aimed at preventing criminals from concealing illegally obtained funds or assets. AML measures help to identify, track, and report suspicious financial activities.

With globalization and digital advancements, fintech has made cross-border transactions faster and more efficient. However, it has also created new avenues for money laundering due to fewer intermediaries, decentralized digital currencies, and anonymity-enhancing technologies (Omotoso, 2024). On one side, fintech can enhance AML detection through the integration of advanced technologies such as AI, ML, and blockchain; on the other, its risks demand stronger regulatory oversight to prevent abuse. The EU has been combating money laundering since 1991, with the adoption of the initial Anti-Money Laundering Directive on the prevention of the use of the financial system for the purpose of money laundering (Council of the European Communities, 1991), which has undergone multiple revisions. These directives set out measures to establish the true identity of customers, report suspicious transactions, and set up preventive systems within organizations. Among other things, entities subject to the Directive are required to identify and verify the identity of their

---

4 UK SMEs can access Santander’s new working capital solution, offering funding approval between £500 and £100,000 within minutes and access within a day, using the Kabbage platform to accelerate automated lending.

customers (customer due diligence) and of beneficial owners (the person who ultimately owns or controls the legal entity or arrangement, on whose behalf a transaction is being carried out), and to monitor their business relationship with customers. The third AML Directive (European Union, 2005) emphasized the requirement to assess and mitigate money-laundering risks based on the customer's profile and his/her business relationships and transaction patterns; the fourth AML Directive (European Union, 2015) made these risk assessments mandatory both at the national and the institutional level. More recently, EU Regulation 2023/1113 (European Union, 2023) has further amended Directive 2015/849 (European Union, 2015), significantly reshaping AML supervision, particularly in relation to crypto-assets, by expanding the scope of supervision, licensing requirements, and subject entities (Tomczak, 2025).

The regulatory environment has changed over time to address new risks and emerging trends. The 2020 AML Action Plan (European Commission, 2020) identified weaknesses in the existing system and led to a comprehensive AML legislative package. A central part of this package is the latest regulation, Regulation 2024/1624 (European Union, 2024b), commonly known as the AMLR, which will apply from July 2027. It establishes harmonized AML rules, replacing the previous minimum standards. Furthermore, it introduces stricter due diligence measures for crypto-asset service providers (CASPs), as well as expanding the list of obliged entities to include, amongst others, football agents and clubs.

The sixth AML Directive (European Union, 2024c) aims to address the inconsistencies and divergences between the Member States' approaches to AML. This Directive expands the definition of the criminal offence of money laundering to include aiding, abetting, inciting, and attempting to commit it. Moreover, it mandates CASPs to conduct due diligence for transactions above EUR 1000 and strengthens financial intelligence units (FIUs) and cross-border information exchange.<sup>5</sup> Additionally, Regulation 2024/1620 (European Union, 2024a) introduces the EU AML Authority (AMLA), which is located in Frankfurt and will be operational from 2028. This organization directly supervises high-risk financial entities and strengthens coordination among national regulators. The establishment of the AMLA signifies a step toward centralized AML enforcement; literature has highlighted the importance of a harmonized system and strong coordination as a prerequisite for an effective AML legal apparatus (Arnone & Borlini, 2010).

Turning to the concrete implications of AML laws for fintech lenders, Article 3 of the AMLR defines financial institutions, credit intermediaries, crowdfunding service providers, and credit institutions, among others, as 'obliged entities'. Fintech lenders are not explicitly outlined as a separate category under the EU AML framework, but they generally fall under broader financial classifications depending on their business

---

5 FIUs are national agencies responsible for receiving, analysing, and sharing financial information related to money laundering and terrorist financing to support law enforcement actions.

model and licensing. For example, P2P lending platforms or those facilitating financing through investor contributions can be categorized as crowdfunding service providers and therefore must comply fully with AML requirements. Indeed, under the EU (2020) Crowdfunding Regulation, a fintech platform that facilitates the granting of loans (P2P lending) or is involved in placing transferable securities and transmitting client orders for crowdfunding purposes is classified as a crowdfunding service provider. Thus, the AMLR does not define fintech lenders explicitly, but it includes broad financial service categories that likely cover them. As a result, fintech lenders must implement robust AML measures, including customer due diligence, transaction monitoring, and reporting of suspicious activities, which will be further investigated in the following section.

### **3. The impact of AML regulation on fintech lending platforms and possible solutions**

As mentioned, the European AML regulatory framework has significant implications for fintech lending platforms, which are therefore required to conduct thorough customer due diligence, 'know your customer' checks, and reporting of suspicious activity, all of which can delay onboarding and transaction processing. This makes fintech lenders less attractive for customers, due to lengthy verification which may worsen the user experience. Moreover, the lenders must also bear the costs of integrating sophisticated solutions to adhere to these requirements; for example, by collecting sensitive customer information there is a need to build robust data protection measures to prevent breaches, not only to comply with AML regulations, but also with data privacy laws such as the GDPR.<sup>6</sup> The risk-based approach requires specific due diligence based on the customer's risk level, which can also slow operations, especially for high-risk clients. Transaction monitoring and data retention requirements necessitate significant investments in systems to detect suspicious activities and maintain records for at least five years, increasing operational costs. Finally, for platforms operating internationally, the need to comply with varying AML rules across jurisdictions adds complexity: fintech companies must invest in comprehensive research to understand the regulatory environment of each jurisdiction they operate in, including staying updated on legislative changes and emerging compliance trends. Although these rules are crucial to combat money laundering, they create significant barriers for fintech lenders, reducing their ability to scale quickly, innovate, and provide uniform services to customers.

---

<sup>6</sup> The GDPR (2016) is a regulation in EU law on data protection and privacy in the European Union and the European Economic Area. It governs the collection, storage, and processing of personal data to ensure that individuals' privacy rights are upheld.

Finding a balance between market integrity, rules simplicity, and innovation is the core principle behind the innovation trilemma theorized by Brummer and Yadav (2017), which suggests that regulators can only effectively achieve two out of these three goals at any given time. In the context of fintech lending, market integrity is essential; however, ensuring it often comes at the cost of rule simplicity. AML regulations, especially when applied across multiple jurisdictions, can be complex and difficult for fintech lenders to handle, particularly for smaller or new firms without extensive legal resources. These complexities may be an obstacle to the platform's ability to innovate because their resources are diverted toward compliance instead of technological advancement. As a result, financial innovation, the key driving force behind fintech, can be limited by the heavy burden of compliance with AML regulations. To balance this, regulators might create rules that are clear and easy to follow, but at the risk of oversimplifying or overlooking unique aspects of fintech operations, potentially weakening market protections. As Brummer and Yadav (2017) highlight, current regulatory frameworks tend to place paramount focus on market integrity and squeeze out innovation.

Regulatory sandboxes can be a solution to this, offering fintech lenders a controlled environment to test and refine AML compliance solutions under supervisory oversight, enabling innovation while ensuring adherence to regulatory standards. However, regulatory sandboxes do not guarantee a direct path to full market entry, despite creating an avenue for experimentation. At the European level, the main initiative in place is the European Blockchain Regulatory Sandbox (2023–2026), which focuses on public-sector use cases through the European Blockchain Services Infrastructure; however, this might limit its relevance to the private-sector fintech industry. Moreover, the AI Regulatory Sandbox (2024) allows companies, including fintechs using AI for risk assessment and fraud detection, to test AI-driven financial solutions under regulatory supervision. Nonetheless, they are not specifically dedicated to fintech and instead focus on broader areas. Some EU countries (such as Poland's KNF or the UK's FCA Regulatory Sandbox) operate regulatory sandboxes at a national level, but this means that fintech firms must navigate different national sandboxes, leading to regulatory inconsistency, which makes it harder for start-ups to scale across the EU (Hamulák, 2016; Maatsch, 2024).

The majority of European countries set up innovation hubs, schemes whereby regulated or unregulated entities can work with competent authorities on fintech-related issues and seek non-binding guidance on the conformity of innovative financial products, services, business models, or delivery mechanisms with licensing, registration, and/or regulatory requirements (ESMA, 2018). According to authors like Buckley et al. (2019) and Roide (2022), innovation hubs should be prioritized over regulatory sandboxes, or where those already exist, they should be integrated into an innovation hub. Innovation hubs may be more cost-effective and versatile than regulatory sandboxes. While the latter have the advantage of offering a structured test-

ing environment, many of their benefits are already provided by innovation hubs at a lower cost and with greater flexibility. Nonetheless, as highlighted by Bartnik (2025), even innovation hubs are not without their shortcomings: in many cases they provide only limited avenues for engagement and are restricted to submitting questions to supervisors or contacting email addresses for general inquiries. Furthermore, the criteria for defining eligible participants in innovation hub programmes remain ambiguous, and frequently rely on vague and broadly defined terminology.

## Conclusions

The rapid evolution of fintech lending presents both opportunities and challenges in the fight against money laundering. In Europe, fintech companies' development is on the rise but has not progressed as rapidly as in other regions. This can partly be explained by the high preexisting banking presence but also by burdensome regulations, unlike in jurisdictions such as China and the USA. As emphasized by Lagarde (2018), attention must be given to the balance between regulatory stringency, which safeguards consumers and investors, and the flexibility needed to foster financial innovation that benefits the public responsibly and sustainably. AML regulations are crucial for maintaining market integrity, but they must not suppress financial innovation. The innovation trilemma proposed by Brummer and Yadav (2017) further stresses the fragile balance regulators must strike between financial innovation, market integrity, and regulatory clarity. A rigid AML framework poses the risk of holding back innovation, while overly flexible regulations could create loopholes for illicit activities.

Regulatory sandboxes and innovation hubs can serve as controlled environments where fintech firms test new AML solutions without facing immediate regulatory burdens. This fosters innovation while ensuring compliance mechanisms are effective before full-scale implementation (Rek, 2024; Rüse, 2014). International cooperation is also essential. Given the borderless nature of fintech transactions, AML enforcement cannot remain fragmented across jurisdictions, and a level playing field for fintech companies must be created (Koranteng & You, 2024). Policymakers should work toward a more harmonized global framework that supports innovation while ensuring robust AML enforcement; this could involve better cross-border collaboration between FIUs, standardized AML compliance requirements, and an increased role for global regulatory bodies in overseeing high-risk fintech activities. It could mean strengthening the role of the Financial Action Task Force (FATF), which sets international standards and provides recommendations on the prevention of global money laundering and terrorist financing. For example, the FATF could introduce real penalties for countries that fail to follow AML rules and work with global

organizations like the IMF and World Bank to apply economic pressure on non-compliant countries.

Finally, as underlined in a report by the European Institute of Innovation and Technology (2024), regulators and supervisors often lack the technological expertise needed to keep pace with rapid fintech innovation, making the implementation of even well-structured regulations difficult. To address this, supervisory bodies must upgrade their technological capabilities and make use of digital automated tools to strengthen oversight and enforcement in the evolving financial landscape.

Referring back to the original research question: AML laws impact the growth of fintech companies by burdening them with excessive compliance expenses which prevent them from using their resources to develop new products. AML regulations play a vital role in preserving financial market stability as well as maintaining investor and borrower trust within fintech platforms. The main challenge for regulators continues to be achieving proper equilibrium between the mentioned forces. This research contributes theoretically by underlining the need for a dynamic regulatory framework that combines principles of adaptive governance with financial innovation theory. It aims to conceptualize regulation as a system that evolves alongside innovation, strengthening the view that regulatory learning and technological adaptation must be a part of the same policy cycle. Such a framework can help reduce compliance costs for fintechs while preserving market integrity.

Future research should explore how emerging technologies (blockchain-based identity verification, AI-driven transaction monitoring, and cross-border data-sharing frameworks) can be put into practice within AML systems without comprising innovation or privacy. Empirical studies could also assess the effectiveness of regulatory sandboxes and innovation hubs across jurisdictions, identifying which governance structures best foster responsible innovation. Finally, future investigation could evaluate the long-term economic and social impacts of AML-driven compliance costs on the growth, competitiveness, and inclusivity of the fintech lending sector. The future development of fintech lending requires a united front which incorporates modern technology with worldwide, and standards and balanced regulatory measures to prevent money laundering and other financial criminal activities.<sup>7</sup>

---

7 ChatGPT, an AI language model developed by OpenAI, was utilized over a period of several weeks for paraphrasing and conducting grammar and syntax checks (OpenAI, personal communication, 16 March 2025 – 5 June 2025). The article was also copyedited by a human.

## REFERENCES

- Arner, D. W., Barberis, J., & Buckley, R. P. (2016). 150 years of fintech: An evolutionary analysis. *Jassa*, 3, 22–29.
- Arnone, M., & Borlini, L. (2010). International anti-money laundering programs. *Journal of Money Laundering Control*, 13(3), 226–271. <https://doi.org/10.1108/13685201011057136>
- Ayata, Z. (2024). European Union contracts in digital environments. In D. Ramiro Troitiño (Ed.), *E-governance in the European Union: Strategies, tools, and implementation* (pp. 173–185). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-56045-3\\_12](https://doi.org/10.1007/978-3-031-56045-3_12)
- Baba, C., Batog, C., Flores, E., Gracia, B., Karpowicz, I., Kopyrski, P., Roaf, J., Shabunina, A., van Elkan, R., & Xu, X. C. (2020). *Fintech in Europe: Promises and threats* [IMF Working paper no. WP/20/24]. International Monetary Fund. <https://doi.org/10.5089/9781513561165.001>
- Bartnik, K. (2025). Can a national financial supervisor support the development of the fintech sector? Innovation hubs as a tool for supporting innovation: The examples of Poland, Estonia, and Italy. *Białostockie Studia Prawnicze*, 30(3), 215–230. <https://doi.org/10.15290/bsp.2025.30.03.14>
- Berg, T., Fuster, A., & Puri, M. (2021). *Fintech lending* [NBER Working paper no. 29421]. National Bureau of Economic Research. <https://doi.org/10.3386/w29421>
- Brummer, C., & Yadav, Y. (2017). The fintech trilemma. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3054770>
- Buckley, R. P., Arner, D. W., Veidt, R., & Zetzsche, D. A. (2019). Building fintech ecosystems: Regulatory sandboxes, innovation hubs and beyond. *SSRN Electronic Journal*. <https://doi.org/10.2139/ssrn.3455872>
- Cambridge Centre for Alternative Finance. (2017). *Entrenching innovation: The 4th UK alternative finance industry report*. <https://www.jbs.cam.ac.uk/wp-content/uploads/2020/08/2017-12-21-ccaf-entrenching-innov.pdf>
- Carney, M. (2017, 25 January). *The promise of fintech – something new under the sun?* [Speech] Deutsche Bundesbank G20 Conference on Digitising Finance, Financial Inclusion and Financial Literacy, Wiesbaden. <https://www.bankofengland.co.uk/speech/2017/the-promise-of-fintech-something-new-under-the-sun>
- Committee on the Global Financial System & Financial Stability Board. (2017). *Fintech credit: Market structure, business models and financial stability implications*. <https://www.fsb.org/uploads/CG-FS-FSB-Report-on-Fintech-Credit.pdf>
- Cornelli, G., Frost, J., Gambacorta, L., Rau, P. R., Wardrop, R., & Ziegler, T. (2020). *Fintech and big tech credit: A new database* [BIS Working paper]. Bank for International Settlements. <https://www.bis.org/publ/work887.htm>
- Costa, M. I. (2023). The legal concept of discrimination by association: Where does it fit into the digital era? *UNIO–EU Law Journal*, 9(1), 16–28.
- Council of the European Communities. (1991). Council Directive 91/308/EEC of 10 June 1991 on the Prevention of the Use of the Financial System for the Purpose of Money Laundering (O. J. L 166, 28.06.1991, pp. 77–83). <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31991L0308>

- European Banking Authority. (2025, July 28). *A careless use of innovative compliance products can lead to money laundering and terrorism financing risks, the EBA says in its opinion* [Press release]. <https://www.eba.europa.eu/publications-and-media/press-releases/careless-use-innovative-compliance-products-can-lead-money-laundering-and-terrorism-financing-risks>
- European Commission. (2020). Communication from the Commission on an Action Plan for a Comprehensive Union Policy on Preventing Money Laundering and Terrorist Financing 2020/C 164/06 (Document 52020XC0513(03)). C/2020/2800. <http://data.europa.eu/eli/dir/2024/1640/oj>
- European Institute of Innovation and Technology. (2024). *Fintech innovation: A balancing act between disruption and regulation* <https://eit.europa.eu/library/fintech-innovation-balancing-act-between-disruption-and-regulation>
- European Securities and Markets Authority (ESMA). (2018). *Joint report on regulatory sandboxes and innovation hubs*. [https://www.esma.europa.eu/sites/default/files/library/jc\\_2018\\_74\\_joint\\_report\\_on\\_regulatory\\_sandboxes\\_and\\_innovation\\_hubs.pdf](https://www.esma.europa.eu/sites/default/files/library/jc_2018_74_joint_report_on_regulatory_sandboxes_and_innovation_hubs.pdf)
- European Union. (2005). Directive 2005/60/EC of the European Parliament and of the Council of 26 October 2005 on the Prevention of the Use of the Financial System for the Purpose of Money Laundering and Terrorist Financing (O. J. L 309, 26.10.2005, pp. 15–36).
- European Union. (2015). Directive (EU) 2015/849 of the European Parliament and of the Council of 20 May 2015 on the Prevention of the Use of the Financial System for the Purposes of Money Laundering or Terrorist Financing (O. J. L 141, 20.05.2015, pp. 73–117).
- European Union. (2023). Regulation (EU) 2023/1113 on Information Accompanying Transfers of Funds and Certain Crypto-Assets and Amending Directive (EU) 2015/849 (O. J. L 150, 09.06.2023, pp. 1–39).
- European Union. (2024a). Regulation (EU) 2024/1620 of the European Parliament and of the Council of 31 May 2024 Establishing the Authority for Anti-Money Laundering and Countering the Financing of Terrorism (O. J. L 2024, 31.05.2024, pp. 45–60).
- European Union. (2024b). Regulation (EU) 2024/1624 of the European Parliament and of the Council of 31 May 2024 on the Prevention of the Use of the Financial System for the Purposes of Money Laundering or Terrorist Financing (O. J. L 2024, 31.05.2024, pp. 1–30).
- European Union. (2024c). Directive (EU) 2024/1640 of the European Parliament and of the Council of 31 May 2024 on the Mechanisms to Be Put in Place by Member States for the Prevention of the Use of the Financial System for the Purposes of Money Laundering or Terrorist Financing (O. J. L 2024, 31.05.2024, pp. 31–55).
- Ferretti, F. (2022). A single European data space and data act for the digital single market: On datafication and the viability of a PSD2-like access regime for the platform economy. *Eur. J. Legal Stud.*, 14, 173. <https://dx.doi.org/10.2924/EJLS.2022.015>
- Giovanola, B. (2023). Justice, emotions, socially disruptive technologies. *Critical Review of International Social and Political Philosophy*, 26(1), 104–119. <https://doi.org/10.1080/13698230.2021.1893255>
- Gopal, M., & Schnabl, P. (2022). The rise of finance companies and fintech lenders in small business lending. *Review of Financial Studies*, 35(11), 4859–4901. <https://doi.org/10.1093/rfs/hhac034>
- Hamulák, O. (2016). *National sovereignty in the European Union: View from the Czech perspective*. Springer. <https://doi.org/10.1007/978-3-319-45351-4>

- Kerikmäe, T., Troitiño, D. & Shumilo, O. (2019). An Idol or an Ideal? A Case Study of Estonian E-Governance: Public Perceptions, Myths and Misbeliefs. *Acta Baltica Historiae et Philosophiae Scientiarum*, 7, 71–80. [10.11590/abhps.2019.1.05](https://doi.org/10.11590/abhps.2019.1.05).
- Koranteng, B., & You, K. (2024). Fintech and financial stability: Evidence from spatial analysis for 25 countries. *Journal of International Financial Markets Institutions and Money*, 93, 102002. <https://doi.org/10.1016/j.intfin.2024.102002>
- Kou, G., & Lu, Y. (2025). Fintech: A literature review of emerging financial technologies and applications. *Financial Innovation*, 11(1). <https://doi.org/10.1186/s40854-024-00668-6>
- Lagarde, C. (2018). *A regulatory approach to fintech*. Finance & Development. <https://www.omfif.org/2018/09/a-regulatory-approach-to-fintech/>
- Langley, P., & Leyshon, A. (2020). The platform political economy of fintech: Reintermediation, consolidation and capitalisation. *New Political Economy*, 26(3), 376–388. <https://doi.org/10.1080/13563467.2020.1766432>
- Lentini, A., Munteanu, D. E., & Zennaro, F. (2025). *Fintech classification methodology* (Markets, Infrastructures and Payment Systems No. 61, pp. 1–40). Banca d'Italia. [https://www.bancaditalia.it/pubblicazioni/mercati-infrastrutture-e-sistemi-di-pagamento/approfondimenti/2025-061/N.61-MISP\\_ENG.pdf?language\\_id=1](https://www.bancaditalia.it/pubblicazioni/mercati-infrastrutture-e-sistemi-di-pagamento/approfondimenti/2025-061/N.61-MISP_ENG.pdf?language_id=1)
- Maatsch, A. (2024). Parliamentary adjustment during a crisis: Interplay of digitalization and domestic context factors. *Internet of Things*, 27, 101316. <https://doi.org/10.1016/j.iot.2024.101316>
- Mazur, V., & Ramiro Troitiño, D. (2024). The members of the EU and e-governance, analysis, and institutional support. In D. Ramiro Troitiño (Ed.) *E-governance in the European Union: Strategies, tools, and implementation* (pp. 39–55). Springer Nature Switzerland. <https://doi.org/10.1007/978-3-031-56045-3>
- Mokrá, L. (2023). Digitally sovereign individuals: The right to disconnect as a new challenge for European legislation in the context of building the EU digital market. In D. Ramiro Troitiño, T. Kerikmäe, & O. Hamulák (Eds.) *Digital development of the European Union: An interdisciplinary perspective* (pp. 189–197). Springer International Publishing. [https://doi.org/10.1007/978-3-031-27312-4\\_12](https://doi.org/10.1007/978-3-031-27312-4_12)
- Omotoso, O. (2024). AML in cross-border fintech transactions: Risks and regulatory measures. *SSRN Working Paper*. <https://doi.org/10.2139/ssrn.5038850>
- Outeda, C. C. (2024). The EU's AI Act: A framework for collaborative governance. *Internet of Things* 27(3), 101291. <https://doi.org/10.1016/j.iot.2024.101291>
- Rek, M. (2024). E-democracy in the EU. In D. Ramiro Troitiño (Ed.) *E-governance in the European Union: Strategies, tools, and implementation* (pp. 103–115). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-56045-3\\_8](https://doi.org/10.1007/978-3-031-56045-3_8)
- Roide, N. (2022). Fintech and anti-money laundering regulation: Implementing an international regulatory hierarchy premised on financial innovation. *Texas A&M Law Review*, 9(2), 465–496. <https://doi.org/10.37419/lr.v9.i2.5>
- Rüse, I. (2014). Nordic–Baltic interaction in European Union negotiations: Taking advantage of institutionalized cooperation. *Journal of Baltic Studies*, 45(2), 229–246. <https://doi.org/10.1080/01629778.2013.846928>

- Suryono, R. R., Purwandari, B., & Budi, I. (2019). Peer to peer (P2P) lending problems and potential solutions: A systematic literature review. *Procedia Computer Science*, 161, 204–214. <https://doi.org/10.1016/j.procs.2019.11.116>
- Tomczak, T. (2025). Nadzór AML nad kryptoaktywami od 30.12.2024 r. – zmiany w Dyrektywie 2015/849 wprowadzone rozporządzeniem 2023/1113. *Białostockie Studia Prawnicze*, 30(3), 125–138. <https://doi.org/10.15290/bsp.2025.30.03.08>
- Troitiño, D. R. (2023). EU elections and internet voting (i-voting). In D. Ramiro Troitiño, T. Kerikmäe, & O. Hamulák (Eds.) *Digital development of the European Union: An interdisciplinary perspective* (pp. 319–333). Springer International Publishing. [https://doi.org/10.1007/978-3-031-27312-4\\_20](https://doi.org/10.1007/978-3-031-27312-4_20)
- Wang, Y. (2023). The impact of financial technology development on money laundering risks. In A. Bhunia, R. B. Ahmad, & Y. Zhu (Eds.), *Advances in economics, business and management research* (pp. 180–192). [https://doi.org/10.2991/978-94-6463-298-9\\_20](https://doi.org/10.2991/978-94-6463-298-9_20)
- Wangchuk, P. (2021). Common types of crowdfunding models, related concepts and its impact on business: A brief literature review. *Asian Journal of Economics Business and Accounting*, 56–63. <https://doi.org/10.9734/ajeaba/2021/v21i1430471>
- Wójcik, D. (2020). Financial geography I: Exploring fintech – maps and concepts. *Progress in Human Geography*, 45(3), 566–576. <https://doi.org/10.1177/0309132520952865>

