IMPACT OF FINTECH SECTOR DEVELOPMENT ON MONEY LAUNDERING PREVENTION

Karolina Geceviciene[1], Irena Danileviciene[1] and Laima Okuneviciute Neverauskiene[1,2,*]

[1]Vilnius Gediminas Technical University, The Faculty of Business and Management, Sauletekio al. 11, LT-10223, Vilnius, Lithuania
[2]Lithuanian Centre for Social Sciences, A. Gostauto 9, LT-01108 Vilnius, Lithuania
[a]karolina.geceviciene@stud.vgtu.lt, [b]irena.danileviciene@vilniustech.lt,
[c]laima.okuneviciute.neverauskiene@vilniustech.lt
[*]Corresponding author

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Abstract:
Research background: In the last decade, as the financial crisis brought the global economy to its knees, financial technology start-ups have surged forward and offered more innovative solutions to problems in the traditional areas of banking, insurance and wealth management. This new and burgeoning industry, which has come to be known as the FinTech industry, is growing. FinTech, as the name suggests, refers to using the latest technology to solve financial service problems. Technology-based innovation is radically changing the financial industry. Financial innovations are attractive and convenient products for consumers. Still, at the same time, they create new problems in the fight against money laundering and terrorist financing and pose new challenges to specialists in improving the system of combating money laundering and terrorist financing and global practice in this field. The concept of FinTech and the ecosystem structure are presented. The impact of development on money laundering prevention is discussed, the indicators leading to the development of the FinTech sector are distinguished.
Purpose of the article: The main aim of the article is to assess the impact of the development of the FinTech sector on money laundering prevention.
Methods: Literature analysis specifies information about FinTech development and money laundering, while multi-criteria assessment methods, TOPSIS, EDAS, and SAW, are used to assess the impact of FinTech sector development on money laundering prevention.
Findings & Value added: The results of country evaluations based on their Anti-Money Laundering Basel index using different multi-criteria assessment methods provide insights that the United Kingdom, Switzerland, and Sweden have performed well in terms of compliance with regulations. Bulgaria, Italy, and Turkey have demonstrated efficiency in addressing money laundering based on the criteria used in the evaluation.

Keywords: financial technologies; financial technology development; money laundering prevention; Fintech regulation; money laundering prevention index.

JEL Classification: E42; E51; G18; G21

1. Introduction

Financial innovations are attractive and convenient products for consumers, but at the same time, they create new problems in the fight against money laundering and terrorist financing and pose new challenges to specialists in improving the system of combating money laundering and terrorist financing and global practice in this field. Nowadays, the speed of execution and processing of transactions, the increase in the number of international transfers, the availability of financial services, the emergence of high-tech financial technologies, including blockchain technology and cryptocurrency based on it, as well as the vulnerability of the financial system and AML legislation to new threats, increase the use of these technologies in non-performing loans (NPL)/terrorist financing (TF) risk for purposes. Financial technologies are improving daily, and their associated risks are growing accordingly. According to Ugli (2022), based on the speed of development and global distribution of modern financial products and the low legal regulation of the management of these products, we can safely say that they will inevitably affect the area of money laundering prevention.

The research object is to identify indicators leading to the development of the FinTech sector. By analysing various factors such as technological advancements, regulatory environment, investment trends, consumer preferences, and market dynamics, the study aims to uncover the primary drivers behind the expansion of FinTech. Understanding these indicators is crucial for policymakers, investors, and industry stakeholders to make informed decisions and strategies that foster continued growth and innovation within the FinTech ecosystem. Through empirical analysis and insights, the research tries to provide valuable insights into the factors shaping the trajectory of the FinTech sector and its broader implications for the financial industry.

The research problem is that the rapidly expanding financial technology sector and the easy availability and use of its services potentially provide a convenient environment for committing criminal acts and legalizing the funds obtained in this way. So, the problem is: How do we properly assess the impact of the development of the FinTech sector on the prevention of money laundering? The research aims to determine the impact of the development of the FinTech sector on money laundering prevention. By examining the financial technology solutions, regulatory frameworks, and technological innovations within the FinTech industry, the study seeks to evaluate their effectiveness in enhancing anti-money laundering (AML) measures. It aims to identify how FinTech tools and platforms contribute to improving AML processes, detecting suspicious transactions, and mitigating risks associated with money laundering activities. To achieve this, a few methods are used: literature analysis and multi-criteria assessment methods: TOPSIS, EDAS, and SAW.

2. Literature Review

2.1. FinTech concept and risks

The financial services industry is changing in parallel with the technological capabilities of the industry‘s transformation. Financial technology (FinTech) is becoming a global phenomenon led by innovators, closely followed by academics, and now attracting the attention of regulators.

Although the concept of FinTech is widely analyzed in the scientific literature, the opinions of the authors differ. Mention (2021) argues that FinTech is a general term for innovative technology-based financial service business models. According to Kagan (2020), FinTech describes new technologies that aim to improve and automate the provision and use of financial services. The basis of FinTech is to help companies, business owners, and consumers better

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manage their financial transactions, processes, and lives using specialized software and algorithms that are used on computers and smartphones.

Li and Xu (2021) state that financial technology is a series of new business models, new technology applications and new products and services that significantly impact the financial market and supply. It has gained much attention for the following benefits: increasing operational efficiency, effectively reducing operating costs, collapsing existing industry structures, blurring industry boundaries, facilitating strategic brokerage, providing new entrepreneurial gateways and democratizing financial services. FinTech can also be considered „any innovative ideas that improve financial service processes by offering technological solutions for different business situations or can be interpreted as information application of technology in finance, financial innovation and digital innovation" (Suryono et al., 2020).

Ogege and Boloupremo (2020) argue that FinTech is a still-evolving industry that seeks to improve the quality of financial service operations, It is an innovative technology that challenges conventional ways of providing financial services. The financial services sector includes banks, accounting firms, credit unions, insurance companies, consumer finance companies, real estate, and services provided to individual users or companies. FinTech is the connection between the financial industry, information technology and innovation. Moreover, the term FinTech comes from the union of the words „finance" and „technology" and reflects what the acronym means, which includes the development of technology and innovation to support banking and financial skills using the latest technologies (Giglio, 2021). FinTech also describes the connection between technologies such as cloud computing and mobile internet with financial services businesses such as loans, payments, money transfers, and other banking.

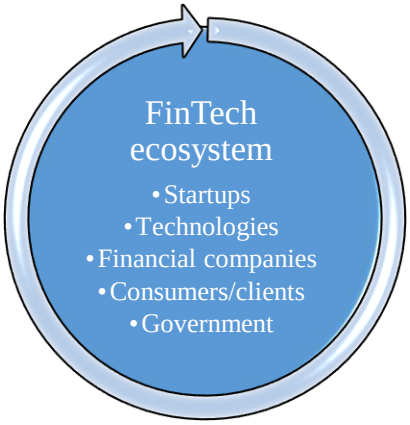
Vucinic and Luburic (2022) define FinTech as technologically enabled innovations in the field of financial services that can lead to the emergence of new business models, applications, processes or products that have a significant impact on financial markets and institutions and the provision of financial services. FinTech is a phase that changes over time as new technologies revolutionize the world (Razzaque and Hamdan, 2020). FinTech is not limited to certain distinct segments that dominate the economy, such as financing or business models such as peer-to-peer lending, but instead encompasses the full range of devices and products typically provided by the financial services industry. Organizations use the best technologies to improve their ability to gain a more significant competitive advantage by providing services. FinTech brings together finance and technology that is delivered automatically and efficiently while proving to be cost-effective.

Although FinTech can be broadly defined as any technology that enables or improves the provision of financial services, such a definition is limited to empirically identifying and classifying real-world financial technologies (Chen et al., 2019). In order to understand the meaning of FinTech, the ecosystem of FinTech is defined below (Figure 1). This ecosystem was defined by Albarrak and Alokley (2021) and consists of five categories – FinTech start-ups, technology developers, government, consumers and traditional financial institutions.

Figure 1 presents the FinTech ecosystem, the most crucial part of which is start-ups. *Startups* are innovative in specific areas, such as payments, international transfers, lending, crowdfunding, capital markets, and insurance and operate at lower costs than their traditional counterparts. Technology developers offer digital tools for social media, big data analytics, cloud computing, artificial intelligence, smartphones and mobile services.

Financial institutions also play an essential role in the FinTech ecosystem. According to Bitvinskas and Maknickiene (2021), most financial flows in countries still belong to traditional financial institutions; they account for most of this system.

Figure 1: The ecosystem of FinTech



Source: compiled by the authors, based on Albarrak and Alokley (2021)

Users are the unifying category of the ecosystem, as all services and products created are designed to meet the expectations and needs of users.

To facilitate the intermediation of financial flows with FinTech companies, *government* authorities apply incentive programs aimed at cooperation between the two parties.

The spectrum of risks in the FinTech sector is wide, and the probability of their occurrence and impact on the financial system differs. According to the research data of the Financial Stability Department of the Bank of Lithuania, several essential risks of the FinTech sector can be distinguished: compliance, operational, credit, financial, fraud and risks for the banking sector. However, the main risk of the Lithuanian FinTech sector is the dangers posed by money laundering and terrorist financing and the lack of prevention. According to various calculations, even 97 percent of financial institutions are also involved in money laundering-related crimes. Although the overall level of money laundering and terrorist financing (PMTF) prevention in Lithuania is assessed positively, in July of 2022, in the recommendations presented by the International Monetary Fund, Lithuania is further encouraged to strengthen PMTF risk supervision and monitoring.

The fact that this risk includes an extensive range of factors is also proven by the index compiled by the AML Basel Index. The Basel AML Index measures money laundering and terrorist financing (ML/TF) risk in jurisdictions worldwide. It is based on a composite methodology containing 18 indicators, grouped into five areas based on five key factors believed to contribute to high ML/TF risk. The fight against money laundering has affected the world economy for many years. Large amounts of money are laundered yearly, posing a threat to the economy. In the scientific literature, the authors similarly define money laundering.

According to Odu (2020), money laundering can be defined as a crime to make a profit so that the proceeds of this crime are concealed or used for criminal activities. Everyday money laundering activities include corruption, market manipulation, tax evasion, drug trafficking and fraud. All funds generated through these activities divert resources that could otherwise be used for economic and social welfare. These activities also adversely affect the countries' overall functioning and stability and financial operations.

According to Kemal (2014) and Kumar et al. (2021), money laundering is a type of dirty money, and the primary purpose of the crime of money laundering is to transform dirty money into clean money in order to hide assets, avoid prosecution and taxes, increase profits and become legitimate. Assessing the efficiency of anti-money laundering programs to identify criminal clients and suspicious transactions in financial institutions is becoming more critical for their reliable operation and efficiency. Money laundering is illegally obtaining an amount

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from various illicit related sources and converting monetary funds from illegal to clean funds using any international investment vehicle or bank.

2.2. Analysis of the indicators leading to the development of the FinTech sector

The development of FinTech is rapidly accelerating the digital financial services sector, giving people worldwide access to faster, cheaper and more efficient tools to manage everyday transactions, protect against emergencies and invest. In the literature, authors describe and analyse FinTech development in different ways. Malciauskaite and Kvietkauskiene (2019), in their research, based on the analysis of scientific literature, assessed the possibilities, problems and challenges of FinTech development in the world. In order to determine the importance and development of FinTech, the article examines the FinTech adaptation indicator and investments received in FinTech companies.

According to Bitvinskas and Maknickiene (2021), the number of sector employees is one indicator describing development. FinTech companies with a minimal number of employees signal to consumers and supervisory authorities about possible risks due to fraudulent activities and the real purpose of the FinTech company, for example, whether the activities carried out comply with the money laundering regulations of the supervisory authorities and the like.

The Ministry of Finance of the Republic of Lithuania issued a report on the approved plan for the growth of FinTech tools, which will monitor and evaluate the following indicators: the number of FinTech companies, the number of jobs created in the FinTech sector, the positions held in the most influential rankings of international financial centres. Researchers (Kukoc, 2021; Nguyen and Dang, 2022; Tao et al., 2022; Wang, 2023) also chose the international FinTech index to measure FinTech development. Batunanggar (2019) and Goecks et al. (2022) analysed FinTech development and regulatory systems in Indonesia. FinTech development indicators were selected after evaluating the entire country‘s FinTech sector according to the fastest-growing areas: peer-to-peer lending (P2P) and electronic payments. In summary, it can be said that the best way to evaluate the development is the FinTech index, because it can be used to evaluate different parts of FinTech and its advantages/disadvantages.

2.3. Theoretical aspects of the influence of FinTech sector development on money laundering prevention

The rapidly expanding financial technology sector the easy availability and use of their services, potentially provide a convenient environment for committing criminal acts and legalizing the funds obtained in this way. Analysing the scientific literature, it was noticed that different authors interpret the influence of the development of financial technologies on the prevention of money laundering in different ways. According to Dzafarova (2022), the growing FinTech sector poses risks in money laundering, and the institutions responsible for preventing this area are not yet fully capable of ensuring it. The researcher analysed the money laundering problem in Lithuania's FinTech sector and claimed that the number of financial technology companies in Lithuania has proliferated over the past year. However, they do not publish and do not provide all the necessary information about their finances and situation, which makes it impossible to ensure that money laundering is avoided and prevents criminals to „launder“ money (Zemgulyte et al., 2019). There is a lack of publicly available information about FinTech companies operating in Lithuania because the average transparency assessment of financial technology companies with the most significant amount of taxes paid to the budget last year is 25 points out of 100.

Also, only about 6 % of FinTech companies operating in Lithuania publicly publish their financial statements. Faccia et al. (2020), Mogaji and Nguyen (2022) argue that one of the most

significant risks facing the financial technology sector is the risk of money laundering. The main reason is that FinTech companies can defy existing anti-money laundering legislation and regulation (Roide, 2022, Meiryani et al., 2023). FinTech companies no longer need professional intermediaries such as banks and others in the financial sector, so they may not be subject to the same financial reporting rules that would regularly promote market stability. Anti-money laundering regulators need an international solution to solve an international problem. According to Choudhary (2023), money laundering problems have arisen with the development of FinTech. Money laundering is attractive to FinTech criminals due to the proliferation of these systems for transaction initiation, unlimited cash flow and anonymous accounts for transaction purposes. In addition, electronic prevention of money laundering has begun supplanting traditional anti-money laundering (transaction laundering). This case shows that FinTech companies can be targeted by criminal groups engaged in money laundering. This data can pose a significant AML threat to the FinTech industry. According to Bytautas and Morkunas (2023), the main risk posed by Lithuanian FinTech is the dangers posed by money laundering and terrorist financing and the lack of prevention. Financial institutions, especially those growing rapidly and often have a less developed self-regulatory mechanism for risk assessment and money laundering prevention compared to traditional financial institutions, are at greater risk of falling into money laundering schemes.

In conclusion, it can be said that different authors similarly define FinTech. The FinTech sector is a sector that changes over time as new technologies revolutionize the world and enable or improve the provision of financial services. The authors also analyse the development of the FinTech sector by distinguishing different sector indicators. It can be noticed that FinTech international indices are primarily repeated in the literature. The authors also often evaluate the number of payments made, the number of FinTech companies, P2P lending indicators and the number of employees in the FinTech sector. It was also noticed that the most common evaluation methods are correlational regression analysis, multi-criteria decision evaluation, and expert evaluation. However, although this sector is described as a revolutionary new technology, the most significant risk posed by FinTech is the dangers and lack of prevention of money laundering and terrorist financing.

3. Methodology

Multi-criteria assessment methods will be used to assess the influence of FinTech sector development on money laundering prevention. The choice of the method was determined by the ease of application and the analysis of the authors (Malciauskaite and Kvietkauskiene, 2019; Bitvinskas and Maknickiene, 2021; Batunanggar, 2019; Demirguc-Kunt et al., 2020; Nguyen and Dang, 2022; Akartuna et al., 2022; Zakaria, 2023) in which the impact of FinTech development on various aspects was evaluated. After analysing the literature, it was found that different authors chose different indicators for the development of FinTech. Therefore, the evaluation criteria are chosen considering the published FinTech development reports and data availability. In order to obtain the most accurate results, the study sample was increased by evaluating the selected 24 countries (including the Baltic countries) for which all data were available in the relevant period. The countries were divided into two categories according to the AML Basel index - low-risk and higher-risk countries. All criteria were weighted using the CRITIC weighting method. The following evaluation criteria were selected:

- number of FinTech companies;
- number of FinTech employees;
- attracted investments in FinTech companies;

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- global FinTech index;
- total number of FinTech users in the country.

TOPSIS is a method for determining the rationality of options close to the ideal point. The essence of this method is to determine the relative distance of each alternative to the „ideally worst" option. The greater the determined distance to the „ideally worst" option, the more suitable the alternative is judged to be for the decision-maker. For the application of the TOPSIS method, a decision matrix X is formed at the beginning, the elements of which are x_ij, i = 1, m; j = 1, n (here *x_ij* – the value of the j-th indicator of the i-th alternative). When applying the TOPSIS method, the elements the decision matrixes normalized according to the formula:

$$\widetilde{x_{ij}} = \frac{x_{ij}}{\sqrt{\sum_{i=1}^{m} x_{ij}^2}} \tag{1}$$

Use the weights of the indicators ω_j, $j = \overline{1,n}$ and the normalized elements of the decision matrix, a weighted normalized matrix is formed:

$$\bar{X} = \begin{pmatrix} \omega_1 \tilde{x}_{11} & \cdots & \omega_n \tilde{x}_{1n} \\ \cdots & \cdots & \cdots \\ \omega_1 \tilde{x}_{m1} & \cdots & \omega_n \tilde{x}_{mn} \end{pmatrix} = \begin{pmatrix} a_{11} & \cdots & a_{1n} \\ \cdots & \cdots & \cdots \\ a_{m1} & \cdots & a_{mn} \end{pmatrix} \tag{2}$$

The "ideally best" alternative is formed from the elements of the weighted normalized matrix according to the formula:

$$A^+ = \left\{ \left(\max_i a_{ij} \,\middle|\, j \in J \right), \left(\min_i a_{ij} \,\middle|\, j \in J' \right) | i = \overline{1,m} \right\} = \{a_1^+, a_2^+, \ldots, a_n^+\} \tag{3}$$

where j is a set of indexes of indicators, the higher values of which are better

J' is a set of indices of indicators, with smaller values being better

The "negative ideal" alternative is formed according to the formula:

$$A^- = \left\{ \left(\min_i a_{ij} \,\middle|\, j \in J \right), \left(\max_i a_{ij} \,\middle|\, j \in J' \right) | i = \overline{1,m} \right\} = \{a_1^-, a_2^-, \ldots, a_n^-\} \tag{4}$$

The distance between the compared i-th and the "ideally best" A^+ alternatives is determined by calculating the distance in n-dimensional Euclidean space according to the formula:

$$S_i^+ = \sqrt{\sum_{j=1}^{n} \left(a_{ij} - a_j^+\right)^2}, (i = \overline{1,m}), \tag{5}$$

and between the i-th and "negatively ideal" A^- alternatives – according to the formula:

$$S_i^- = \sqrt{\sum_{j=1}^{n} \left(a_{ij} - a_j^-\right)^2}, (i = \overline{1,m}). \tag{6}$$

The final step of the TOPSIS method determines the relative distance of each i-th alternative to the "ideally worst" option:

$$P_i = \frac{S_i^-}{S_i^+ + S_i^-}, i = \overline{1,m} \; when \; C_i \in [0,1]. \tag{7}$$

Based on the values of C_i a priority queue of alternatives is formed. The rational alternative is considered to be the one with the highest values of C_i.

The basic concept of the **SAW method** is to find a weighted sum of ratings for each alternative. Firstly, the normalized efficiency matrix of the r_{ij} value of the i-th object (alternative) of the j-th criterion is calculated according to the formula when the exponent is maximizing

$$\overline{r_{ij}} = \frac{r_{ij}}{max_j r_{ij}} \tag{8}$$

and when the indicator is minimizing

$$\overline{r_{ij}} = \frac{min_j r_{ij}}{r_{ij}} \tag{9}$$

where $\bar{r}_{ij}$ is normalized efficiency matrix values

r_{ij} is the decision matrix

The final values of S_j are calculated below according to the formula:

$$S_j = \sum_{i=1}^{m} w_i r_{ij} \tag{10}$$

where S_j is the weighted sum of the assessment

w_i is criterion weight

m is number of criteria

EDAS method is a method based on the distance from the mean solution. Firstly, the value of the positive distance from the mean is calculated according to the formula when the indicator is maximizing

$$PDA_{ij} = \frac{\max\left(0, \left(x_{ij} - AV_j\right)\right)}{AV_j} \tag{11}$$

and when the indicator is minimizing

$$PDA_{ij} = \frac{\max\left(0, \left(AV_j - x_{ij}\right)\right)}{AV_j} \tag{12}$$

where X_{ij} is solution matrix

AV_j is average of criteria

The longest negative distance from the mean is calculated below using the formula when indicator is maximizing

$$NDA_{ij} = \frac{\max\left(0, \left(AV_j - x_{ij}\right)\right)}{AV_j} \tag{13}$$

and when indicator is minimizing

$$NDA_{ij} = \frac{\max\left(0, \left(x_{ij} - AV_j\right)\right)}{AV_j} \tag{14}$$

Also, the weighted sums of the positive and negative distance from the mean values are calculated according to the following formula when the indicator is maximizing

$$SP_i = \sum_{j=1}^{m} w_j PDA_{ij} \tag{15}$$

and when the indicator is minimizing

$$SN_i = \sum_{j=1}^{m} w_j NDA_{ij} \tag{16}$$

where w_j is criteria weights

PDA_{ij} are values of positive distance from the mean

NDA_{ij} – the longest negative distance from the mean

Further step is to calculated the weighted sums of SP_i and SN_i values when the indicator is maximizing

$$NSP_i = \frac{SP_i}{max_i(SP_i)} \tag{17}$$

and when the indicator is minimizing

$$NSN_i = 1 - \frac{SN_i}{max_i(SN_i)}, \tag{18}$$

where NSP_i is weighted sum of values of positive distance from the mean

NSN_i is weighted sum of values of negative distance from the mean

4. Results

After performing the calculations using the TOPSIS, EDAS and SAW methods, the results were obtained, which are presented in Tables 1 and 2.

Based on the results of the study presented in Table 1, it can be said that each country is assigned a rank The country with a higher P_i, AS_i, S_j, index gets a higher rank. After ranking the selected countries, the following results are obtained: according to the TOPSIS method, the United Kingdom is ranked first, according to the EDAS method, Portugal is ranked first and according to the SAW method, the United Kingdom is ranked first.

Based on the results of the analysis presented in Table 2, it can be said that each country is assigned a rank. The country with a higher P_i, AS_i, S_j, index gets a higher rank. After ranking the selected countries, the following results are obtained: by the TOPSIS method, the first-place

Table 1: Results of the multi-criteria evaluation of countries with a low AML Basel index

Low AML Basel index countries	TOPSIS assessment		EDAS assessment		SAW assessment	
	P_i	Rank	AS_i	Rank	S_j	Rank
Ireland	0.40259	4	0.92685	4	0.42937	2
Belgium	0.39016	10	0.89676	5	0.29437	11
Denmark	0.39682	6	0.92754	3	0.38842	4
Estonia	0.39276	8	0.86608	6	0.31126	9
Spain	0.31978	13	0.63808	12	0.21051	14
Italy	0.27643	14	0.66887	10	0.16272	15
United Kingdom	0.60118	1	0.00000	15	0.77684	1
Latvia	0.39186	9	0.97139	2	0.35872	6
Lithuania	0.37996	11	0.80510	7	0.26090	12
Netherlands	0.40223	5	0.64075	11	0.30228	10
Portugal	0.39348	7	1.00000	1	0.36293	5
France	0.27207	15	0.55012	13	0.23260	13
Sweden	0.40758	3	0.80441	8	0.33589	8
Switzerland	0.42764	2	0.76197	9	0.40712	3
Germany	0.35314	12	0.44865	14	0.35163	7

Source: compiled by the authors based on own calculations

according to the ranking is Bulgaria, by the EDAS method – Moldova, by the SAW method – Bulgaria. According to the evaluation methods, Serbia, Turkey and Albania took the last places.

Table 2: Results of the multi-criteria evaluation of countries with high AML Base index

High AML Basel index countries	TOPSIS assessment		EDAS assessment		SAW assessment	
	P_i	Rank	AS_i	Rank	S_j	Rank
Albania	0.46381	7	0.94893	2	0.15040	10
Armenia	0.54857	4	0.94053	3	0.46358	4
Bulgaria	0.77663	1	0.41129	7	0.49784	1
Italy	0.61580	2	0.16261	9	0.46710	2
Croatia	0.53576	5	0.42528	6	0.34166	7
Malta	0.59243	3	0.50536	5	0.43556	5
Moldova	0.52139	6	1.00000	1	0.32485	8
Serbia	0.42349	10	0.68630	4	0.15084	9
Turkey	0.46352	8	0.00000	10	0.46570	3
Hungary	0.43204	9	0.23101	8	0.35737	6

Source: compiled by the authors based on own calculations

5. Discussion

The FinTech sector represents a dynamic and rapidly evolving industry that uses new technologies to develop financial services on a global scale. The development of the FinTech sector is analysed with a particular emphasis on various indicators and international indices commonly employed to assess its growth and impact. Despite its innovative potential, the rise of FinTech also brings forth significant challenges, particularly concerning the prevention of money laundering and terrorist financing activities by its digital nature and global reach. Numerous multi-criteria assessment methods, such as TOPSIS, EDAS, and SAW, evaluate countries' efficacy in combating money laundering based on their AML Basel index scores.

In evaluating countries with low AML Basel index scores, the United Kingdom consistently emerges as a top performer across assessment methodologies, showcasing its robust anti-money laundering measures and regulatory frameworks. Portugal, Latvia, and Denmark demonstrate efforts in combating financial crime, as evidenced by their rankings in various assessments. Countries with higher AML Basel index scores display varying rankings, indicating disparities in their efficiency in addressing money laundering challenges.

Bulgaria is a leading performer across multiple assessment methods, suggesting a commitment to combating financial crime within its jurisdiction. However, countries like Italy

and Turkey show fluctuations in their rankings, highlighting potential areas for improvement in their anti-money laundering strategies. These evaluations define the critical importance of approaches to combating money laundering and terrorist financing within the dynamic FinTech landscape.

By identifying strengths and weaknesses across different jurisdictions, policymakers and stakeholders can efficiently develop targeted interventions to mitigate financial crime risks. Furthermore, fostering collaboration and innovation within the FinTech sector is essential to building a resilient global financial ecosystem that prioritizes security and integrity. Regulators and industry players must work together to develop robust frameworks that leverage technology to enhance compliance and strengthen anti-money laundering efforts.

Moreover, advancements in artificial intelligence, blockchain technology, and big data analytics offer promising solutions for improving the detection and prevention of bad financial activities. However, such technological advancements also pose new challenges, including the need for continuous adaptation to emerging threats and the complexities of regulating decentralized platforms. Additionally, ensuring inclusivity and accessibility within the FinTech ecosystem is crucial to mitigating financial exclusion and inequality risks.

Enhanced collaboration among financial institutions, regulatory, law enforcement agencies, and FinTech start-ups is essential to foster a united front against economic crime. This collaborative approach should prioritize information sharing, capacity building, and the development of standardized frameworks to facilitate effective AML/CFT (Combating the Financing of Terrorism) efforts across borders. Furthermore, public-private partnerships play a pivotal role in leveraging collective expertise and resources to address evolving threats and safeguard the integrity of the global financial system.

Education and awareness initiatives are also instrumental in empowering individuals and organizations to recognize and report suspicious financial activities efficiently. By promoting a compliance and ethical conduct culture, stakeholders can contribute to building a more resilient and trustworthy financial ecosystem. In conclusion, while the FinTech sector holds innovation and economic growth potential, its success in addressing the inherent risks associated with money laundering and terrorist financing through concerted efforts and collaborative approaches.

6. Conclusions

The FinTech sector changes over time as new technologies revolutionize the world and enable or improve the provision of financial services. The development of the FinTech sector is deeply analysed by distinguishing different indicators of the sector, and FinTech international indices are mostly repeated in the literature. Although this sector is described as a revolutionary new technology, the greatest risk posed by FinTech is the dangers and lack of prevention of money laundering and terrorist financing.

After evaluating the countries with a low AML Basel index using the multi-criteria assessment method TOPSIS, it was found that the United Kingdom took the first place, Switzerland took the second place and Sweden took the third place. Using the multi-criteria evaluation method EDAS, it was found that Portugal took the first place, Latvia took the second place and Denmark took the third place. Using the multi-criteria evaluation method SAW, it was found that the United Kingdom took the first place, Ireland took the second place and Switzerland took the third place.

After evaluating the countries with a high AML Basel index using the multi-criteria assessment method TOPSIS, it was found that Bulgaria took the first place, Italy took the

second place, and Malta took the third place. Using the multi-criteria evaluation method EDAS, it was found that Moldova took first place, Albania second place, and Armenia third place. Using the multi-criteria assessment method SAW, it was found that Bulgaria took the first place, Italy took the third place, and Turkey took the third place.

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