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Money Laundering: A Review of Literature and Future Research

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Abstract: Money laundering is one of the financial crimes that has become a major concern in most countries worldwide. The rising number of reported instances of money laundering could be driven by several reasons. With this growth, there is a growing academic interest in money laundering research; therefore, opportunities should be created for interested academics to evaluate the evolution of research in this field. This study was intended to evaluate published studies in this field from the origin of the idea of money laundering to the present to identify major trends or issues in money laundering research and to propose a research agenda for the future. A qualitative research design was adopted using a content analysis approach. It was found that most of the research focuses more on the relationship of money laundering with other offenses and the detection methods but lacking in the understanding of money laundering and the rules and regulations related to money laundering. This study is intended to be useful to current and future scholars in the field of financial crimes who are interested in the evolution of the literature and in identifying areas for future research.

Keywords: *Money Laundering, Tax haven, Detection Method*

1. Introduction

Academics, practitioners, and other stakeholders have acknowledged money laundering as one of the financial crimes that has become a major concern in the majority of countries throughout the world. Money laundering is frequently regarded as an exotic activity, whose name suggests some kind of sinister financial crime. It is, however, one of the most popular financial activities associated with illegal financial schemes, such as fraud, corruption, and terrorism financing. Money laundering is widely believed to have originated during the reign of Al Capone, who, although the most notorious criminal of his day, was only convicted of basic tax evasion (Bridges, 1997). This prompts the creation of laws against money laundering that concentrate on the source, accounting, and distribution of monies.

Money laundering is a serious crime that involves using financial transactions to hide the source and ownership of money that has been obtained illegally. Money laundering has many effects on society and the global economy. Firstly, by enabling criminals to conceal their unlawful funds in legitimate financial institutions, money laundering compromises the integrity of the financial system (Simser, 2020; Tran & De Koker, 2019). This might cause people to lose faith in banks and the economy as a whole. Secondly, money laundering gives criminals the tools to fund other illicit activities including terrorism, human trafficking, and drug trafficking (Whisker & Lokanan, 2019). It may also make it possible for dishonest authorities to steal public funds and utilize them for their benefit. Thirdly, money laundering can hinder economic growth by diverting funds from legal enterprises and placing them in the hands of criminals. This may result in less investment, slower economic expansion, and more poverty. Finally, money laundering can be used to destabilize democratic institutions and influence political systems. This might lead to a weakening of the rule of law, increasing corruption, and political instability (Paradise, 1998).

Ultimately, money laundering has a wide-ranging effect and has the potential to negatively affect society and the global economy. Therefore, initiatives must be taken to combat this crime through strong legal frameworks and effective international cooperation.

Due to the great impact of money laundering on every aspect of our lives, the issues surrounding money laundering need to be comprehended thoroughly. However, the lack of such studies hinders our awareness of the existing conditions, difficulties, and future direction of money laundering. Consequently, the main purpose of this study is to review the development of money laundering. To investigate this new development, a research literature survey on money laundering was carried out. The paper includes a chronological overview of the literature (Neely 2016) on the topic of money laundering and its connected domains. The review is drawn from a broad analysis of the spectrum of money-related literature without limits as to a particular time range or limited journal list.

2. Methodology

For this research, a qualitative research design was adopted using a content analysis approach. Since the main objective of this paper is to look at how money laundering has changed over time, the following steps were taken. The first step was to select a group of journals likely to contain a study on money laundering and financial crime, with the search limited to journal articles. This investigation relied heavily on the library and other academic archives. The second step was to find articles on primary topics related to money laundering. The paper's current emphasis is on English-language articles that discuss money laundering from theoretical or practical angles. Using the keywords "money laundering" and "financial crime," a bibliographic search was done to carry out this identification.

Each article was then carefully read and analyzed to make sure that it did indeed discuss money laundering entirely or in part. Thus, even though money laundering was not specifically mentioned in the title, keywords, or abstract, the articles related to money laundering were then selected. The analysis of the money laundering development focuses primarily on the number of articles, research themes, research methodologies, and research instruments as well as the research context.

3. Results and Discussion

Number of articles

The search resulted in the discovery of a total of 54 papers, which were distributed among 29 different journals. The most recent paper to be added to the database was published in 2023, while the earliest one in the dataset was published in 2001. Out of these 54 articles, six papers are conceptual, and their authors conducted library archiving. The remaining part of the paper (48) is devoted to empirical studies, which collected data from a wide variety of sources including surveys, interviews, court cases, and mutual investigation reports.

Table 1 offers a graphical representation illustrating the distribution of research articles over three distinct periods: 1968-2002, 2003-2012, and 2013-2023. Each period is broken down to show the total number of articles published, alongside data detailing the geographical origin of each article. The table highlights a significant trend: there has been a marked increase in the number of research articles on money laundering in the most recent period (2013-2023). This sharp rise contrasts with the more modest numbers seen in the earlier periods, indicating a growing scholarly interest and focus on the topic. The data suggests a heightened awareness and investigation into money laundering issues over time, particularly in the last decade.

In conclusion, researchers from the United States exhibit a notable interest in the topic of money laundering. Although no articles were published on this subject during the earliest period (1968-2002), there is a significant increase in the number of publications from the United States in both the second period (2003-2012) and the most recent period (2013-2023). Over the entire span from 1968 to 2023, a total of ten articles originating from the United States stand out as the highest number of publications from any single country. Notably, seven of these ten articles were published in the final period (2013-2023), underscoring the United States' leading position in this field of research during this recent decade. This trend indicates a growing emphasis and expertise in money laundering research within the U.S. academic community, particularly in recent years.

Table 1: Number of money laundering articles in the period 1986-2023

Period		1986-2002	2003-2012	2013-2023	Total
No of article		**1**	**12**	**41**	**54**
Geographical Origin	Australia			3	3
	Bahrain			1	1
	Belgium		1	1	2
	China		2	1	3
	Colombia			1	1
	Estonia			1	1
	Ethiopia			1	1
	Germany		1		1
	Greece		1		1
	Guatemala			1	1
	India			1	1
	Italy			5	5
	Kazakhstan			1	1
	Malaysia		2	1	3
	Netherland			1	1
	Pakistan		1		1
	Poland			1	1
	Russia			3	3
	Singapore			2	2
	Somalia			1	1
	Spain			3	3
	Sweden			1	1
	Ukraine			1	1
	United Kingdom	1	1	3	5
	United States of America		3	7	10

In the final period (2013-2023), there is a clear trend indicating that researchers from a wide range of countries have increasingly recognized the importance of money laundering as a critical issue. This growing awareness reflects a broader understanding of the substantial impact money laundering has on societies globally. Researchers from various nations have begun to address the complexities of this issue, highlighting its far-reaching consequences and the need for comprehensive research and solutions.

The rise in international scholarly interest suggests that money laundering is now seen as a pressing concern that extends beyond national borders, affecting economies, financial systems, and social structures worldwide. This shift underscores a collective acknowledgment of the need for global cooperation and deeper investigation into the mechanisms and repercussions of money laundering. As a result, the final period is marked by a significant increase in the volume and diversity of research dedicated to unraveling and mitigating the effects of money laundering.

Results by themes

This article breaks the period down into three sections to analyze the progression of money laundering: 1986–2002, 2003–2012, and 2013–2023. There are a total of 54 articles, 17 of which are concerned with matters about rules and regulations. Other themes include the interrelationship between money laundering and other offenses or crimes, as well as detection methods for money laundering as can be seen in Table 1. On the other hand, the concentration of the research theme is graphically represented in Table 2. It would appear that the issue of money laundering detection methods has become the topic that the vast majority of researchers are most interested in studying.

According to the information presented in Table 2, the second period (2003-2013) broadened the topics by having a greater number of researchers investigate the laws and regulations about money laundering, as well as the connections between money laundering and other crimes, such as fraud, tax evasion, corruption, and terrorism. Compared to the first period, which consisted of a single study by Alldridge (2001), the increase in the number of articles indicates a growing interest in the topic of money laundering. Both Rhodes and Palastrand (2004) and Kwok (2008) focused their attention on the understanding of money laundering and its legislation in the United Kingdom and Hong Kong, respectively. In the meantime, researchers, such as Dolar and Shughart (2011) and Betron, (2012) discussed the level of compliance that professional service providers such as financial institutions have with enforced anti-money laundering provisions. On the other hand, Picard and Pieretti (2011) discuss the effects of force policies on offshore financial centers as well as their capability to enforce the compliance of such centers with anti-money laundering regulations. In their research, the authors focus on the ability of pressure policies to affect compliance.

On a different theme, several researchers who study the practice of money laundering have offered their thoughts on the interconnections that exist between money laundering and other types of illegal activity. The market peso Exchange is the specific example that Jurith (2003) uses to elaborate on how money laundering is intimately associated with terrorism and drug dealing in Colombia. In the meantime, from the Malaysian perspective, the connection between the flow of money laundering and terrorist financing within its borders has always been the continuous focus of broad and sustained efforts of combating strategies and these efforts have been ongoing for quite some time (Shanmugam & Thanasegaran, 2008). It was discovered that there is a connection between the activities of money laundering and the establishment of tax havens (Schwarz, 2011), as well as the practice of illegally accepting deposits (Muhammaddun Mohamed & Ahmad, 2012).

During this period, there was a notable increase in interest concerning the methods employed to detect money laundering. Ngai et al. (2011) observed that while data mining techniques have been extensively applied to detect insurance fraud, there remains a significant gap in research regarding their application to other forms of financial crime. Specifically, there is a dearth of studies focusing on mortgage fraud, money laundering, and fraud in commodities and securities. This gap highlights an opportunity for further investigation into how data mining could be adapted and optimized to identify and combat these other types of financial misconduct. Addressing this gap could enhance the effectiveness of fraud detection systems across a broader range of financial activities and improve overall regulatory and enforcement strategies. These methods might offer primary answers to the challenges that are inherent in the classification and detection of fraudulent data. Larik and Haider (2011) introduced a hybrid anomaly detection method that utilizes clustering to construct customers' usual behavior and statistical approaches to identify transactions that deviate from the matching group behavior. Christou et al. (2011) offer an innovative hybrid approach for identifying fraud in the rapidly expanding area of lotteries and online gambling.

In the final period (2013 to 2023), there was an increase of number of research conducted on all three themes. Based on the review, most of the researchers focused on money laundering detection methods as their research theme. These studies were undertaken by Dreżewski et al. (2015); Klimova (2016); Colladon and Remondi (2017); Jayasree and Balan (2017); Badal-Valero et al. (2018); Norton (2018); Passas (2018); Eifrem (2019); Demetis (2018); Ravenda et al. (2019); Singh and Best (2019); Turki, et al. (2020); Canhoto (2021); Domashova and Makilina (2021); Eulaiwi (2021); Rocha-Salazar et al. (2022); Tertychnyi et al. (2022) and Zhang et al. (2022) respectively.

Dreżewski et al. (2015) research focuses on criminal analysis, a big data processing system that processes data from various sources that is useful to an investigator. The researchers subsequently suggested a piece of software called the Money Laundering Detection System (MLDS). After successfully analyzing the central database of a factoring company, primarily active in Italy, over 19 months, Colladon and Remondi (2017) focused on the potential for the implementation of network analytic techniques to prevent money laundering. In the UK, banks use the structural coupling concept as part of an expanded money laundering behavioral profiling program to combat money laundering (Demetis, 2018). Badal-Valero et al. (2018) have also highlighted the invention of a new money laundering detection tool that integrates data mining and supervising machine learning tools. At the same time, new transaction management (TRM) proxies could be used by authorities as warning signs of money laundering activities, according to a study conducted by Ravenda et al. (2018) on a sample of 355 Italian Mafia-controlled businesses.

Singh and Best (2019) investigate the application of visualization techniques that show how link analysis may be applied in spotting erroneous bank transactions may help in effectively identifying patterns of money laundering activities. Meanwhile, an empirical case study conducted by Turki et al. 2020) found that there was a highly significant impact of implementing regulatory technology (RegTech) innovations in banks on the effectiveness of money laundering prevention in Bahrain.

Numerous studies have focused on improving money laundering detection systems. Jayasree and Siva Balan (2017) found that a bitmap index within a Bitmap Index-based Decision Tree is effective for efficiently accessing large financial databases. Research by Canhoto (2020), Domashova and Mikhailina (2021), Tertychnyi et al. (2022), and Zhang et al. (2022) explored the application of machine learning in developing detection tools. Canhoto (2020) investigated the potential of reinforced machine learning for identifying unusual financial activities and money laundering. Domashova and Mikhailina (2021) used machine learning methods to pinpoint organizations at risk of money laundering, while Zhang et al. (2022) proposed a methodology for creating a national anti-money laundering (AML) index based on Mutual Evaluation reports and machine learning models. In their latest study, Tertychnyi et al. (2022) examined detection techniques for an AML monitoring system designed to meet three key requirements: delivering accurate and non-redundant alerts, providing timely notifications, and associating discussions and risk forecasts with each alert.

Some researchers have highlighted the significance of Suspicious Activity Reports (SARs). For instance, Norton (2018) explored this legislation from the perspective of the evolving relationship between auditors and the state, as well as the broader surveillance framework within which SARs are situated. Auditors are tasked with submitting SARs into ELMER, an online database, but they often lack clear guidance on how to determine suspicion. Klimova (2016) found that commercial banks frequently delay reporting suspicious transactions to the monitoring system, making such information less effective for prosecuting illegal activities. In another approach, Rocha-Salazar et al. (2022) utilized the characteristics of legal entities and self- and group comparisons within dynamic social networks to identify transactions involving shell companies in financial systems. Additionally, Eulaiwi et al. (2021) investigated whether the presence of Suspicious Matters Reports (SMRs) and whistle-blower hotlines within financial organizations influences the relationship between tax haven usage and the pricing of audit and non-audit services.

In a different terrain, Eifrem (2019) examined how graph technology can mine the truth from data and rapidly identify potential areas of concern. Earlier on, Passas (2018) discovered that cash payment limitations (CPLs), which were established to aid in the management of terrorism financing and money laundering, are nowhere near a panacea that can solve all of these problems and cannot make any of them disappear. Yet, even when each of these criminal issues is studied separately, there is no empirical link between CPLs and effective measures. Didimo et al. (2019) introduced TeFNet as a new approach for the visual evaluation of temporal networks in the fiscal domain, designed to differentiate tax evasion, fiscal fraud, and money laundering.

In this period, the researchers also focus on the relationships of money laundering with criminal activities. Stack (2015) conferred the use of conversion centers by money laundering organizations to facilitate tax evasion by the private sector and embezzlement by the state sector. This is supported by Ardizzi et al. (2018) who used an econometric model in their study and found that financial deepening of Italian municipalities is positively affected by the local intensity of criminal activity and money laundering. Some researchers study the relationships between money laundering and drug trafficking activities, such as research conducted by McCarthy-Jones et al. (2020), Devine et al. (2020), Caulkins and Reuter (2022) and Loayza et al. (2019).

Table 2: Summary of previous studies by year and themes on money laundering

Themes		Years		
		1986-2002	2003-2012	2013-2023
Rules and Regulation	General			Gobena (2021); Bartolozziet al. (2022); Niyetullayev and Almond (2014)
	Understanding		Rhodes and Palastrand (2004); Kwok (2008)	
	Compliance		Dolar and Shughart (2011); Betron (2012)	Omar and Johari (2015); Poon (2021)
	Effect		Picard and Pieretti (2011)	McCarthy et al. (2015); Balakina et al. (2017); Verhage (2017); Tan (2018); Gowin et al. (2021); Premti et al. (2021)
Relationship of Money laundering and other offences		Alldridge (2001)	Jurith (2003); Shanmugam and Thanasegaran (2008); Schwarz (2011); Muhammaddun Mohamed and Ahmad (2012);	Stack (2015); Ardizzi et al. (2018); Gikonyo (2018); Loayza et al. (2019); Devine et al. (2020); McCarthy-Jones et al. (2020); Fletcher et al. (2021); Rusanov and Pudovochkin(2021), Shen et al. (2021); Kemsley et al. (2022); Caulkins and Reuter(2022)
Money laundering detection method			Ngai, Hu, Wong, Chen & Sun (2011); Larik and Haider (2011); Christou et.al. (2011)	Dreżewski et al. (2015);Klimova (2016); Colladon and Remondi (2017); Jayasree and Siva Balan (2017); Badal-Valero et al. (2018); Demetis (2018); Norton (2018); Passas (2018); Didimo et al. (2019); Eifrem (2019); Ravenda et al. (2019); Singh and Best (2019); Turki et al. (2020); Canhoto (2021); Domashova and Makilina (2021); Eulaiwi (2021); Rocha-Salazar et al. (2022); Tertychnyi et al. (2022); Zhang et al. (2022)

Other researches relate money laundering with illicit proceeds from piracy ventures (Gikonyo, 2018), bitcoin (Fletcher et al., 2021), terrorism financing (Rusanov and Pudovochkin, 2021), illegal cattle ranching and deforestation activities (Devine et al., 2020), contraband smuggling (Shen et al., 2021) and also tax evasion (Kemsley et al., 2022).

On the other hand, several researchers have concentrated on the regulatory and legislative aspects of combating money laundering. Overall, these studies collectively underscore the importance of robust regulatory frameworks, effective institutional oversight, and rigorous compliance mechanisms in the fight against money laundering. Noteworthy studies in this area include those by Gobena (2021), Bartolozzi et al. (2022), Omar and Johari (2015), Niyetullayev and Almond (2014), McCarthy et al. (2015), Balakina et al. (2017), Verhage (2017), Tan (2018), Gowin et al. (2021), and Premti et al. (2021). Gobena (2021) attributes the rise in money laundering in Ethiopia to the country's economic and political systems, arguing that the growth of money laundering is deeply intertwined with these systemic factors. The research suggests that systemic weaknesses and political instability create an environment where money laundering can thrive. In contrast, Bartolozzi et al. (2022) emphasize the role of national Financial Intelligence Units (FIUs) in strengthening anti-money laundering (AML) frameworks. They argue that the establishment of FIUs as central authorities responsible for overseeing AML compliance and enforcement was anticipated to significantly bolster deterrence strategies. This expectation is based on the premise that FIUs can enhance the effectiveness of AML measures through improved coordination and information sharing. Omar and Johari (2015) focus on the compliance of professional service providers with AML regulations, similar to the work of Dolar and Sugart (2011). Their research explores how well these providers adhere to AML rules and the challenges they face in maintaining compliance. This area of study highlights the importance of ensuring that professionals in the financial and legal sectors follow AML regulations effectively to prevent money laundering.

Niyetullayev and Almond (2014) examined Kazakhstan's approach to legalizing illicit money laundering, particularly the role of amnesty. The study showed that the shadow economy in post-Soviet transition states can make broad criminalization of money laundering self-defeating unless supplemented with "market-constituting" policies. Meanwhile, Verhage (2017) observed that the global anti-money laundering system impacts privacy and due process yet remains largely unexamined due to the difficulty in measuring its preventative effects.

McCarthy et al. (2015) concluded that when the budget is set, less money should be allocated for financial oversight and more money should go towards specialist police units to combat money laundering. Instead of preventing money launderers from serving the market, current strategies that emphasize financial monitoring merely boost the industry's profitability. Balakina et al. (2017) examined the stigma effect by analyzing cross-border capital flows to verify the presence and direction of the impact of soft regulations advocated by international organizations against banking secrecy, particularly concerning alleged tax havens and financial centers. However, Singapore's anti-money laundering (AML) regulations have proven insufficient as a deterrent against money laundering activities in financial institutions. This inadequacy is attributed to regulators' excessive reliance on deterrence-based reasoning, the absence of an "enforcement pyramid," and economic incentives that lead regulators to be lenient towards financial institutions (Tan, 2018). Subsequently, Poon (2021) showed that the regulatory capacity of US sanctions has increased by delegating compliance and enforcement responsibilities to Singaporean state authorities and advanced business services (ABS) intermediaries. Additionally, two studies investigated the valuation impacts of anti-money laundering (AML) enforcement actions. Gowin et al. (2021) analyzed the effects of AML enforcement and Office of Foreign Assets Control (OFAC) economic sanction violations on U.S. financial institutions (FIs), while Premti et al. (2021) focused on their impact on European banks.

4. Conclusion, Future Research and Limitations

In summary, previous research did not place a significant amount of emphasis on the topic of money laundering. In later years, there was a rise in the amount of research conducted on the practice of money laundering. Earlier studies consisted primarily of discussions on the laws and guidelines governing money laundering. Subsequently, some researchers began to shift their focus to more expansive issues in money laundering, such as the connections between money laundering and other types of crimes. In addition, research on various methods of detection started to become the primary area of focus for many scholars.

In subsequent research, it may be possible to do a comparison examination of the detection methods utilized by nations all over the world. In addition, a comparison analysis of the methods that various service providers follow when reporting suspicious transactions to promote uniformity and effective preventative measures. Research into the effects of having a high level of spiritual intelligence might also be a topic of interest to look into.

The evaluation of studies that are offered here is not comprehensive; rather, it is only an initial attempt to inspire more research in the field so that the topic of money laundering can remain at the center of attention. The fact that just a small number of empirical research were used is one of the limitations of the study. Even though there are certain limitations to this study, it nonetheless provides scholars working in the field and beginner researchers with useful information and assistance in a practical setting by developing a research agenda for further investigation. This study shows that most of the research focuses more on the relationship of money laundering with other offenses and detection methods while lacking an understanding of the intricacies of money laundering itself and the relevant rules and regulations. Therefore, future research should delve deeper into the foundational aspects of money laundering, including the legal frameworks, regulatory measures, and the practical challenges faced in enforcing these regulations. Addressing this gap will provide a more comprehensive understanding of money laundering, aiding in the development of more effective prevention and intervention strategies. In conclusion, this article is a great resource for individuals working in the field of money laundering who are interested in gaining a deeper comprehension of the present scenario.

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References

Alldridge, P. (2001). Are tax evasion offenses predicate offenses for money-laundering offenses? *Journal of Money Laundering Control, 4*(4). https://doi.org/10.1108/eb027286

Ardizzi, G., De Franceschis, P., & Giammatteo, M. (2018). Cash payment anomalies and money laundering: An econometric analysis of Italian municipalities. *International Review of Law and Economics, 56*, 105-121. https://doi.org/10.1016/j.irle.2018.08.001

Badal-Valero, E., Alvarez-Jareño, J. A., & Pavía, J. M. (2018). Combining Benford's law and machine learning to detect money laundering: An actual Spanish court case. *Forensic Science International, 282*, 24-34. https://doi.org/10.1016/j.forsciint.2017.11.008

Balakina, O., D'Andrea, A., & Masciandaro, D. (2017). Bank secrecy in offshore centers and capital flows: Does blacklisting matter? *Review of Financial Economics, 32*, 30-57. https://doi.org/10.1016/j.rfe.2016.09.005

Bartolozzi, D., Gara, M., Marchetti, D. J., & Masciandaro, D. (2022). Designing the anti-money laundering supervisor: The governance of the financial intelligence units. *International Review of Economics & Finance, 80*, 1093-1109. https://doi.org/10.1016/j.iref.2022.03.009

Betron, M. (2012). The state of anti-fraud and AML measures in the banking industry. *Computer Fraud & Security, 2012*(5), 5-7. https://doi.org/10.1016/S1361-3723(12)70039-8

Bridges, M. J. (1997). Taking the profit out of crime. *Journal of Money Laundering Control, 1*(1), 26-32. https://doi-org.ezaccess.library.uitm.edu.my/10.1108/eb027117

Canhoto, A. I. (2021). Leveraging machine learning in the global fight against money laundering and terrorism financing: An affordances perspective. *Journal of Business Research, 131*, 441-452. https://doi.org/10.1016/j.jbusres.2020.10.012

Caulkins, J. P., & Reuter, P. (2022). How much demand for money laundering services does drug selling create? Identifying the key parameters. *International Journal of Drug Policy, 103*

Christou, I. T., Bakopoulos, M., Dimitriou, T., Amolochitis, E., Tsekeridou, S., & Dimitriadis, C. (2011). Detecting fraud in online games of chance and lotteries. *Expert Systems with Applications, 38*(10), 13158-13169. https://doi.org/10.1016/j.eswa.2011.04.124

Colladon, A. F., & Remondi, E. (2017). Using social network analysis to prevent money laundering. *Expert Systems with Applications, 67*, 49-58. https://doi.org/10.1016/j.eswa.2016.09.029

Demetis, D. S. (2018). Fighting money laundering with technology: A case study of Bank X in the UK. *Decision Support Systems, 105*, 96-107. https://doi.org/10.1016/j.dss.2017.11.005

Devine, J. A., Currit, N., Reygadas, Y., Liller, L. I., & Allen, G. (2020). Drug trafficking, cattle ranching, and land use and land cover change in Guatemala's Maya Biosphere Reserve. *Land Use Policy, 95*. https://doi.org/10.1016/j.landusepol.2020.104578

Didimo, W., Grilli, L., Liotta, G., Montecchiani, F., & Pagliuca, D. (2019). Visual querying and analysis of temporal fiscal networks. *Information Sciences, 505*, 406-421. https://doi.org/10.1016/j.ins.2019.07.097

Dolar, B., & Shughart, W. F. (2011). Enforcement of the USA Patriot Act's anti-money laundering provisions: Have regulators followed a risk-based approach? *Global Finance Journal, 22*(1), 19-31. https://doi.org/10.1016/j.gfj.2011.05.002

Domashova, J., & Mikhailina, N. (2021). Usage of machine learning methods for early detection of money laundering schemes. *Procedia Computer Science, 190*, 184-192. https://doi.org/10.1016/j.procs.2021.06.033

Dreżewski, R., Sepielak, J., & Filipkowski, W. (2015). The application of social network analysis algorithms in a system supporting money laundering detection. *Information Sciences, 295*, 18-32. https://doi.org/10.1016/j.ins.2014.10.015

Eifrem, E. (2019). How graph technology can map patterns to mitigate money-laundering risk. *Computer Fraud & Security, 2019*(10), 6-8. https://doi.org/10.1016/S1361-3723(19)30105-8

Eulaiwi, B., Al-Hadi, A., Taylor, G., Dutta, S., Duong, L., & Richardson, G. (2021). Tax haven use, the pricing of audit and non-audit services, suspicious matters reporting obligations, and whistleblower hotline facilities: Evidence from Australian financial corporations. *Journal of Contemporary Accounting & Economics, 17*(2). https://doi.org/10.1016/j.jcae.2021.100262

Fletcher, E., Larkin, C., & Corbet, S. (2021). Countering money laundering and terrorist financing: A case for bitcoin regulation. *Research in International Business and Finance, 56*. https://doi.org/10.1016/j.ribaf.2021.101387

Gikonyo, C. (2018). Rationalizing the use of the anti-money laundering regime in tackling Somalia's piracy for ransom. *International Journal of Law, Crime and Justice, 52*, 155-164. https://doi.org/10.1016/j.ijlcj.2017.11.004

Gobena, M. A. (2021). Why money laundering is nurtured in Ethiopia? *Journal of Money Laundering Control, Vol. ahead-of-print No. ahead-of-print.* https://doi-org.ezaccess.library.uitm.edu.my/10.1108/JMLC-09-2021-0090

Gowin, K.D., Wang, D., Jory, S.R., Houmes, R., & Ngo, T. (2021). Impact on the firm value of financial institutions from penalties for violating anti-money laundering and economic sanctions regulations. *Finance Research Letters, 40,* 1-7. https://doi.org/10.1016/j.frl.2020.101675

Jayasree, V., & Siva Balan, R.V. (2017). Money laundering regulatory risk evaluation using Bitmap Index-based Decision Tree. *Journal of the Association of Arab Universities for Basic and Applied Sciences, 23,* 96-102. http://dx.doi.org/10.1016/j.jaubas.2016.03.001

Jurith, E. (2003). Acts of terror, illicit drugs and money laundering. *Journal of Financial Crime, 11*(2), 158-162. https://doi.org/10.1108/13590790410809086

Kemsley, D., Kemsley, S.A., & Morgan, F.T. (2022). Tax evasion and money laundering: A complete framework. *Journal of Financial Crime, 29*(2), 589-602. https://doi.org/10.1108/JFC-09-2020-0175

Klimova, S. (2016). Role of intelligent systems in upgrading of information exchange between FSFM1 and banks. *Procedia Computer Science, 88,* 534-537. https://doi.org/10.1016/j.procs.2016.07.476

Kwok, D.Y.K. (2008). An overview of the anti-money laundering laws of Hong Kong. *Journal of Money Laundering Control, 11*(4), 345-357. https://doi.org/10.1108/13685200810910411

Larik, A.S., & Haider, S. (2011). Clustering-based anomalous transaction reporting. *Procedia Computer Science, 3,* 606-610. https://doi.org/10.1016/j.procs.2010.12.101

Loayza, N., Villa, E., & Misas, M. (2019). Illicit activity and money laundering from an economic growth perspective: A model and an application to Colombia. *Journal of Economic Behavior & Organization, 159,* 442-487. https://doi.org/10.1016/j.jebo.2017.10.002

McCarthy, K.J., van Santen, P., & Fiedler, I. (2015). Modeling the money launderer: Micro-theoretical arguments on anti-money laundering policy. *International Review of Law and Economics, 43,* 148-155. https://doi.org/10.1016/j.irle.2014.04.006

McCarthy-Jones, A., Doyle, C., & Turner, M. (2020). From hierarchies to networks: The organizational evolution of the international drug trade. *International Journal of Law, Crime and Justice, 63.* https://doi.org/10.1016/j.ijlcj.2020.100436

Muhammaddun Mohamed, Z., & Ahmad, K. (2012). Investigation and prosecution of money laundering cases in Malaysia. *Journal of Money Laundering Control, 15*(4), 421-429. https://doi.org/10.1108/13685201211266006

Neely, A. (2016). The evolution of performance measurement research – developments in the last decade and a research agenda for the next.

Niyetullayev, N., & Almond, P. (2014). Money laundering and the shadow economy in Kazakhstan. *Journal of Money Laundering Control, 17*(2), 128-140. https://doi.org/10.1108/JMLC-05-2013-0015

Ngai, E.W.T., Hu, Y., Wong, Y.H., Chen, Y., & Sun, X. (2011). The application of data mining techniques in financial fraud detection: A classification framework and an academic review of the literature. *Decision Support Systems, 50*(3), 559-569. https://doi.org/10.1016/j.dss.2010.08.006

Norton, S.D. (2018). Suspicion of money laundering reporting obligations: Auditor compliance, or skeptical failure to engage? *Critical Perspectives on Accounting, 50,* 56-66. https://doi.org/10.1016/j.cpa.2017.09.003

Omar, N., & Johari, Z.A. (2015). An international analysis of FATF recommendations and compliance by DNFBPS. *Procedia Economics and Finance, 28,* 14-23. https://doi.org/10.1016/S2212-5671(15)01076-X

Paradise, T.S. (1998). Money laundering and international political economy. *Journal of Money Laundering Control, 1*(3), 229-244. https://doi-org.ezaccess.library.uitm.edu.my/10.1108/eb027145

Passas, N. (2018). Report on the debate regarding EU cash payment limitations. *Journal of Financial Crime, 25*(1), 5-27. https://doi.org/10.1108/JFC-06-2017-0058

Picard, P.M., & Pieretti, P. (2011). Bank secrecy, illicit money and offshore financial centers. *Journal of Public Economics, 95*(7–8), 942-955. https://doi.org/10.1016/j.jpubeco.2011.01.004

Poon, J. P.H. (2021). Regulating the global illicit economy: Singapore's role in United States' spatial financial surveillance. *Political Geography, 91.* https://doi.org/10.1016/j.polgeo.2021.102493

Premti, A., Jafarinejad, M., & Balani, H. (2021). The impact of the Fourth Anti-Money Laundering Directive on the valuation of EU banks. *Research in International Business and Finance, 57.* https://doi.org/10.1016/j.ribaf.2021.101397

Ravenda, D., Valencia-Silva, M.M., Argiles-Bosch, J.M., & García-Blandón, J. (2019). Money laundering through the strategic management of accounting transactions. *Critical Perspectives on Accounting, 60,* 65-85. https://doi.org/10.1016/j.cpa.2018.08.003

Rhodes, R., & Palastrand, S. (2004). A guide to money laundering legislation. *Journal of Money Laundering Control, 8*(1), 9-18. https://doi.org/10.1108/13685200510621271

Rocha-Salazar, J., Segovia-Vargas, M., & Camacho-Miñano, M. (2022). Detection of shell companies in financial institutions using a dynamic social network. *Expert Systems with Applications, 207.* https://doi.org/10.1016/j.eswa.2022.117981

Rusanov, G., & Pudovochkin, Y. (2021). Money laundering in the modern crime system. *Journal of Money Laundering Control, 24*(4), 860-868. https://doi-org.ezaccess.library.uitm.edu.my/10.1108/JMLC-08-2020-0085

Schwarz, P. (2011). Money launderers and tax havens: Two sides of the same coin? *International Review of Law and Economics, 31*(1), 37-47. https://doi.org/10.1016/j.irle.2010.12.001

Shanmugam, B., & Thanasegaran, H. (2008). Combating money laundering in Malaysia. *Journal of Money Laundering Control, 11*(4), 331-344. https://doi.org/10.1108/13685200810910402

Shen, Y., Sharkey, T.C., Szymanski, B.K., & Wallace, W. (2021). Interdicting interdependent contraband smuggling, money and money laundering networks. *Socio-Economic Planning Sciences, 78.* https://doi.org/10.1016/j.seps.2021.101068

Simser, J.R. (2020). Canada's financial intelligence unit: FINTRAC. *Journal of Money Laundering Control, 23*(2), 297-307. https://doi-org.ezaccess.library.uitm.edu.my/10.1108/JMLC-10-2019-0079

Singh, K., & Best, P. (2019). Anti-money laundering: Using data visualization to identify suspicious activity. *International Journal of Accounting Information Systems, 34.* https://doi.org/10.1016/j.accinf.2019.06.001

Stack, G. (2015). Money laundering in Ukraine: Tax evasion, embezzlement, illicit international flows and state capture. *Journal of Money Laundering Control, 18*(3), 382-394. https://doi.org/10.1108/JMLC-05-2014-0013

Tan, V. (2018). The art of deterrence: Singapore's anti-money laundering regimes. *Journal of Financial Crime, 25*(2), 467-498. https://doi.org/10.1108/JFC-01-2018-0001

Tertychnyi, P., Godgildieva, M., Dumas, M., & Ollikainen, M. (2022). Time-aware and interpretable predictive monitoring system for anti-money laundering. *Machine Learning with Applications, 8.* https://doi.org/10.1016/j.mlwa.2022.100306

Tran, T.T.H., & De Koker, L. (2019). Aligning financial inclusion and financial integrity: Regulating and supervising microfinance in Vietnam. *Journal of Money Laundering Control, 22*(4), 595-613. https://doi-org.ezaccess.library.uitm.edu.my/10.1108/JMLC-01-2019-0004

Turki, M., Hamdan, A., Cummings, R.T., Sarea, A., Karolak, M., & Anasweh, M. (2020). The regulatory technology "RegTech" and money laundering prevention in the Islamic and conventional banking industry. *Heliyon, 6*(10). https://doi.org/10.1016/j.heliyon.2020.e04949

Verhage, A. (2017). Great expectations but little evidence: Policing money laundering. *International Journal of Sociology and Social Policy, 37*(7/8), 477-490. https://doi.org/10.1108/IJSSP-06-2016-0076

Whisker, J., & Lokanan, M.E. (2019). Anti-money laundering and counter-terrorist financing threats posed by mobile money. *Journal of Money Laundering Control, 22*(1), 158-172. https://doi-org.ezaccess.library.uitm.edu.my/10.1108/JMLC-10-2017-0061

Zhang, G., Gao, Z., Dong, J., & Mei, D. (2022). Machine learning approaches for constructing the national anti-money laundering index. *Finance Research Letters.* https://doi.org/10.1016/j.frl.2022.103568