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EFFECTIVENESS OF THE AML REGIME

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LIST OF FIGURES

LIST OF TABLES

LIST OF ABBREVIATIONS

5AMLD	Directive 2018/843 of the European Parliament and the Council
AML	Anti-money laundering
CTF	Combating the Financing of Terrorism
EBA	European Banking Authority
EIOPA	European Insurance and Occupational Pensions Authority
ESMA	European Securities and Markets Authority
FATF	Financial Action Task Force on Money Laundering
FIU	Financial Intelligence Unit
HoFIU	Head of Financial Intelligence Unit
IEWG	Information Exchange on Money Laundering/ Terrorist Financing Working Group
IMF	International Monetary Fund
INTERPOL	International Criminal Police Organization
KRP	Keskusrikospoliisi
ML	Money laundering
MONEYVAL	Council of Europe Select Committee of Experts on the Evaluation of Anti-Money Laundering Measures

MSCWG	Membership, Support, and Compliance Working Group
NBI	National Bureau of Investigation
PEP	Politically Exposed Person
PPWG	Policy and Procedures Working Group
TATWG	Technical Assistance and Training Working Group
UBO	Ultimate Beneficial Owner
UN	United Nations
UNODC	United Nations Office on Drugs and Crime

ABSTRACT

Matias Vulli: Effectiveness of the AML regime
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The purpose of this thesis is to review the current anti-money laundering regime and particularly the evaluation of effectiveness. The aim is to identify how the effectiveness of the regime can be and has been assessed. This is a current question as the AML regime is reported to bear significant costs internationally for the public and private sector while lacking evidence of the effectiveness of the regime.
The thesis relies on two different methods. First is a document analysis of the FATF's methodology guide. The second is a literature review of the academic research on the effectiveness of AML.
The main finding of the thesis is that the effectiveness of the regime can be divided into exo- and endogenous effectiveness. While endogenous effectiveness has been assessed by the FATF in their MERs, exogenous effectiveness that would connect the AML efforts with an effect of decreased laundering or crime rates has yet been inaccessible. The difficulties behind this are discussed further and evolve largely around quality or lack of data. More specifically there is a lack of accurate estimates on laundering, the data is not comparable due to asymmetries and the methodology has not established consistency.
The thesis provides insights into how effectiveness is currently accessed or not accessed. It also offers insights into why grasping the effectiveness is so difficult even though crucially important. It also serves as a wide window to the systems of ML and AML. Even though it is not typical for an academic text to be wider than specific the general information serves a purpose as the phenomena of AML and ML are somewhat unfamiliar to many.

Keywords: money laundering, anti-money laundering, literature review, effectiveness

CONTENTS

1. INTRODUCTION

1.1 Background

"However beautiful the strategy, you should occasionally look at the results."

Winston Churchill

Money laundering is generally associated with large-scale organised crime and criminal networks as well as with corruption. Organized crime is a global business of macroeconomic dimensions: the market for illegal drugs alone is roughly equivalent to the world's 20th largest economy: Sweden, which has a GDP of $300 billion. In Europe, the main threat posed by organized crime is the level of infiltration in the economy and therefore in the society at large (Barone and Masciandro 2011, 2). According to an estimate conducted by the UN, the global volume of money laundering has been estimated to be approximately 2-5 % of the global GDP (UN, 2020). This equals approximately 800-2000 billion measured in US dollars. It is necessary to mention that the estimates are not considered accurate but as best from bad alternatives as the measurement methodology has not been published and it is possible, that they are affected by political powers (Pol, 2018B, 5). The trend however has been observed to be increasing globally In Europe, many actors in the European bank sector have gone through either a money-laundering scandal or have been under-raised suspicions on the matter. These actors include banks such as Danske bank in Estonian (Bjerregaard & Kirchmaier, 2019), Nordea, and one of the biggest actors in Sweden, Swed bank. The scope of money laundering is global and especially vulnerable are countries with complex financial systems (Schott, P, 2006, 9). Other national-level factors, that Schott has pointed out are inadequate, inefficient, and corrupted anti-money laundering infrastructure (Schott, 2006, 9). Considering the scale of the phenomena, it is surprising how little discussion there is between money laundering and policy effectiveness (Pol, 2018A).

How are money laundering and anti-money laundering connected? As a phenomenon money laundering is as old as the history of illegal money. In the time of prohibition in the US, funds obtained from illegal trafficking and the trade of alcohol were funnelled through laundries that were operating exclusively on cash. This was done to fade out the illegal source of the

funds, making them appear “clean”. That is believed to be the etymologic base of the expression “to launder money” (Ferwerda et. Al, 2011, 2), The process has by now taken many new forms, but the basic concept has remained the same. The idea is to be able to use the funds obtained from illegal activities without being connected with the illegal source of the funds.

The impetus for the regulation of money laundering was given in the United States by Kefauver Crime Committee in 1951 (Van Duyne, Groenhuijsen & Schudelaro, 2005, 119). The problem culminated in the fight against Italian American organised crime and “ill-gotten gains”, most famously *La Cosa Nostra* (Van Duyne, Groenhuijsen & Schudelaro, 2005, 119). As an answer the Organised Crime Control Act was enacted in 1970, which established for the authorities the right to freeze the defendant’s assets (Van Duyne, Groenhuijsen & Schudelaro, 2005, 119) Sixteen years later money laundering was criminalised in the Money Laundering Control Act in 1986. The idea behind criminalising money laundering was to decrease the profitability of organised crime as a part of the war against drugs (Tiwari, Keep & Kumar, 2020, 272). More recently the topic achieved new international awareness at the beginning of the millennium due to the terrorist attacks against the US on September 11th, 2001. It was claimed that money laundering is centrally connected with funding terrorism (Issaoui, Hassen, Wassim, 2017). This event shook the legislators and politicians internationally and created an increasing demand for the concept that had been developing since the 1970s, the AML At the current time of the global covid pandemic a concern has been raised on the vulnerability of state subsidies to being laundered and used to support the illegal economy.

To understand the problematics between money laundering and anti-money laundering it is essential to understand the global nature of money laundering and the dynamism of operations related. Money laundering has a firm connection with so-called predicate crimes that are profit-orientated. The International Monetary Fund (IMF) has listed crimes preceding money laundering such as corruption, drug trafficking, market manipulation, fraud, and tax evasion (IMF, 2020). These predicate crimes are the ones that create a stream of illicit funds, which further creates the demand for money laundering. The aim of AML regulation is two-sided. From one side, it is about protecting the financial system from illicit funds and from moving the funds to tax havens. On the other hand, the aim is to decrease the number of predicate offences committed, by making money laundering more costly for the launderers.

As Unger & Hertog (2012, 287) compare money laundering to water, it always finds its way. The dynamic nature of money laundering stems from the fact that "both money laundering and AML are socio-technical systems that co-evolve" (Angell & Demetis, 2005). Whereas the AML system is through the development of the regulatory framework and cooperation trying to fill in the gaps in the field to prevent illegal funds from being laundered, money launderers are trying to find new ones to exploit. Therefore, money laundering activities and methods being used are in constant interaction with the regulatory framework. The notion of this paradox of preventive legislation in the context of AML has also been present in literature (Hyttinen, 2021, 52). New exploitable possibilities can occur from e.g., new technologies and communicational or regulatory asymmetries between countries. In addition, in the European Union, the free movement of people, goods, and services can be seen as creating possible vulnerabilities referring to ML (Naheem, 2017). As a countermeasure ML regulation has been harmonised through directives and enhancing international cooperation has been gaining attention (Hyttinen, 2021, 56).

1.2 Aim of the research

This study aims to discuss the problem of measuring the effectiveness of the anti-money laundering regime based on academic literature. The value of researching the topic could easily be rationalised with multiple arguments. The key factor is the public nature of anti-money laundering since many of the actors in the field are funded by collecting taxes. This creates a link of accountability between the actors working on AML, the citizens and corporations indirectly funding this activity. The premise behind this is in the spirit of the New public management that gathered taxes and payments that are used to fund the public sector should be used effectively to justify the collection of taxes. A second equally important point is the cost of compliance with evolving AML regulation, which increases the costs, especially in the financial sector in the form of enhancing customer due diligence requirements, filing suspicious transaction reports, and meeting all requirements of the regulation. It is somewhat obscure that after decades of research on both money laundering and anti-money laundering not to mention ever-increasing regulation in the form of international standards, EU directives, and national legislation, little attention and resources are directed to evaluating the effectiveness. In the present lack of evidence on the effectiveness, it is important to discuss why there is so little discussion on such a relevant aspect and what are the current barriers making it difficult to measure the effectiveness. This paper aims to offer a systematic review on difficulties currently preventing grasping AML effectiveness, report on the study of this subject as well as raise awareness on this domestically little-discussed topic. Research questions are formed to help the process of fulfilling the aim of the research and to specify the focus of the research.

Research questions:

How can the effectiveness of the regime be assessed?

1. *How has effectiveness been approached by the FATF?*
2. *How has effectiveness been approached in academic literature?*

The numbered questions present the sub-questions whereas the question before them is the main research question. The idea of researching the effectiveness of the regime is derived from previous but recent research by Tiwari, Gepp, and Kumar (2020), in which they categorized the research field of money laundering by conducting a thorough literature review. This creates a direct link between this research and the research already published, which simultaneously positions it in the broader context of anti-money laundering research. The three sub-questions are aimed to contribute to solving the main question and provide a more in-depth view of the matter. Additionally, answering sub-questions builds a more convincing case by providing more evidence concerning answering the main question.

1.4 Structure and methodology

The thesis starts with a front page with a title of the thesis supplemented with the author's name, organisation, faculty, and the date of the publication. This is followed by a table of contents containing the basic structure of the thesis (e.g., Fig. 1). The last part before the abstract of the thesis is the list of the figures, tables, and abbreviations, which especially might help readers not familiar with the terminology. After the abstract, the reader should have a solid understanding of the background knowledge of the thesis and a little insight into the topic that it is about.

The rest of the thesis is divided into seven chapters, which are formed to keep the structure clear and more easily approachable. The first chapter is to make the reader familiar with some basic information about phenomena; how has it evolved and why is this relevant. It also introduces the aim of the thesis and the research questions as well as discusses the scope and limitations of the thesis. The second chapter involves the literature review on earlier research on money laundering as a wider phenomenon. Chapter three introduces the phenomenon of money laundering from a theoretical point of view. Chapter four introduces the main actors in the regime. Chapter five discusses measuring the effectiveness whereas chapter six is the actual analysis. Chapter 7 concludes the results and discusses them. Lastly, there will be a reference list and appendices.

1.5 Research design

The study has two literature reviews and document analysis. The first review is a wider look into the literature on money laundering whereas the second one is more specific and the actual contribution of this thesis. The process started with familiarising with the topic of anti-money laundering. This was done by conducting multiple searches on Pro-Quest, Science-Direct, Scopus, and Google Scholar databases to achieve an overall picture of the focus on the research phenomena. Choosing multiple databases limits the impact of any one publication and contributes to controlling this bias. The search strings can be found in Appendix 1 searches 1-13. From here additional articles were discovered by following references in the articles using berry-picking. It must be mentioned that multiple articles referred have been derived from Tiwari, Kepp, and Kumar´s (2020) article. This article was also used in deriving the categorisation of the AML literature in the wider literature review. The original search for information and exploring the topic was done before familiarising with the article. Therefore, it has not affected crucially to how the image of the AML research has been formed. After the original picture was formed, the categorisation was judged to be adequate and practical. Nevertheless, it must be mentioned that the categorisation is a construction and other categorisations from the topic could be argued to be equally adequate as overlaps do exist.

The methodology used in the review on the effectiveness of the AML is a literature review based on Scopus, Pro-Quest, Science Direct, and Google Scholar databases. The articles are narrowed down to the years 2010-2020 and different limitations have been used based on the functions of the databases. The aim has been to focus on academic peer-reviewed articles. The search string used is 14. search *(appendice.1*). Search results included a total number of 1239 items of which 1000 were from Google Scholar. Search results were filtered down to 359. Filters consisted of the closeness to the specific topic, language, and the form of publication; exclusion of working-, conference papers, professional literature, books, etc. Of these 359 articles, 88 were either case studies or studies that had specific geographical scope, most commonly in Asia or developed countries. This was interpreted to reflect the current situation in which to make a statement on the actual effectiveness of the regime it needs to be narrowed down to a specific area due to the existing divergence among countries despite the extensive global harmonisation efforts.

A literature review was selected as a research method for two main reasons. Firstly, empirical data on the research subject is difficult to collect. Secondly, due to a lack of previous expertise on the matter, a literature review allowed to structure a more comprehensive understanding of the phenomenon. This in turn made it possible to keep the research tightly linked with the context. The context is the financial system and our society that has been penetrated by money laundering, which is linked to value, private ownership, and criminal activities creating the problem of illicit gains. The AML has evolved as an answer along with the phenomena of ML, and the development of AML is tightly linked with the evolution of the ML. To study this phenomenon as a novice requires wide utilization of previously conducted research to be able to arrive at relevant conclusions. This is also the reasoning behind including a wide and general literature review and comprehensive description of the phenomenon and actors before the review on the matter of effectiveness of the AML. From a research point of view, Kallio (2006, 18) also emphasizes the need for conducting reviews as a method to synthesize and bring together research findings as the speed at which new articles are published is accelerating.

The formation of the literature review on the effectiveness of the AML follows the structure as presented below. Firstly, the research problem has been identified and relevant research questions are formulated to support the achieving of the aims of the thesis. This is followed by a literature search which consisted of forming search strings and separating relevant articles from search results. Selected data is further evaluated and analysed. Deriving from these steps a synthesis is constructed in a form of a literature review to answer the research questions.

1. Problem Identification: How is the effectiveness of the AML regime accessed
2. Literature search; Scopus, Science-Direct, Pro-Quest, and Google Scholar
3. Data evaluation; Evaluation and filtering of search results
4. Data Analysis Data table
5. Presentation; Review

The review is aimed to be a synthesis of information, not just listed data. According to (Toracco, 2005, 362) “It is a creative activity that produces a new model, conceptual framework, or other unique conception informed by the author’s intimate knowledge of the

topic. The result of a comprehensive synthesis of the literature is that new knowledge or perspective is created even though the review summarizes previous research. The formation of new information is a noble and ambitious goal. In this thesis, a realistic aim is to make relevant observations, analyse them and draw general conclusions. The analysis of the FATF's approach to the effectiveness of the AML is carried out as document analysis. The document used as a material is the methodology handbook that FATF uses to carry out the mutual evaluations, which focus on the state of countries' AML systems as well as their effectiveness.

For the aim of the thesis, it was important to include FATF's view on accessing effectiveness. This is since it is the single most important institution of the regime in terms of regulative powers, and it happens to conduct evaluations on effectiveness as a part of the mutual evaluation reports. In practice, the most efficient way was selected to achieve this goal, and therefore a document analysis was conducted on the FATF's methodology guide. This document gives thorough assistance and guidance on how to evaluate the effectiveness with practices compliant with the FATF methodology. The guide is read, and observations are made from the approach FATF uses according to the methodology guide.

1.7 Scope and limitation

The scope of the research is geographically wide, meaning that as a global problem the point of view will also be global. This will inevitably decrease the depth of the information geographically as there will not be a possibility to define finer nuances and asymmetries between geographical and regulatory areas, which link to the techniques in-use and valid regulation. Analysing the subject in detail would require scoping down the geographical area, identifying the forms of ML that are being used and assessing the regulation being used. In this thesis, the emphasis will be broadly on Europe and the Western world.

Another point worth sharpening is that when arriving at the analysis chapter and beyond, the extensive introductory information introduced before is to give the reader a solid overall understanding, which provides a basis to assess the phenomena. Furthermore, the AML regime is seen as a system that spreads geographically the coverage around the globe and consists of multiple actors who form their subsystems and interact which each other. Demonstrate this a relevant example of this is the FATF, which is one of the largest scale

actors measured by member countries agreeing with the 40 recommendations. Under the FATF there are actors such as the European Union which also has member countries forming their subsystem. Yet again, EU member countries have their national governance, enforcement, and FIUs, which co-operate between other members, their institutions, and with other networks, they are members of.

The articles, which were narrowed out from search results were case studies, developed countries, theses, conference papers, publications written in another language than English, working papers, patents, internet publications, such as websites and blog posts, TF, corruption and Asia. It became evident that AML is not the same globally, but differs within countries having different definitions, national legislation, and cultural environment referring especially to corruption. Finding and including all relevant articles was most likely not achieved due to limited resources. However, the most severe limitation is the lack of empirical evidence, which unfortunately was the only way to move forward due to the lack of resources and high confidentiality of data.

2. RESEARCH ON AML

Academic research on money laundering can be broadly categorised into six different research branches, which are closely related to each other and overlap occasionally. According to a categorisation made by Tiwari, Gepp, and Kumar (2020, 275), these categories are *detection of money laundering*, the *effect of money laundering on other fields and the economy*, the *role of actors and their relative importance, the magnitude of money laundering, AML framework, and its effectiveness* and lastly *new opportunities for money laundering*. It needs to be emphasized that a big part of the conducted research on the matter AML framework and its effectiveness could be categorised within the other categories so overlap between the categories exists and categorisation should not be taken too strictly since a significant amount of discretion is used in the process. In the following chapter, magnitude, detection, and the effect of laundering on other fields and economy. Different actors are introduced in chapter 4 as a part of the AML framework. Effectiveness is further discussed in chapters 5 and 6. New opportunities will only be discussed in the context of other categories as it is a vast category and resources are limited.

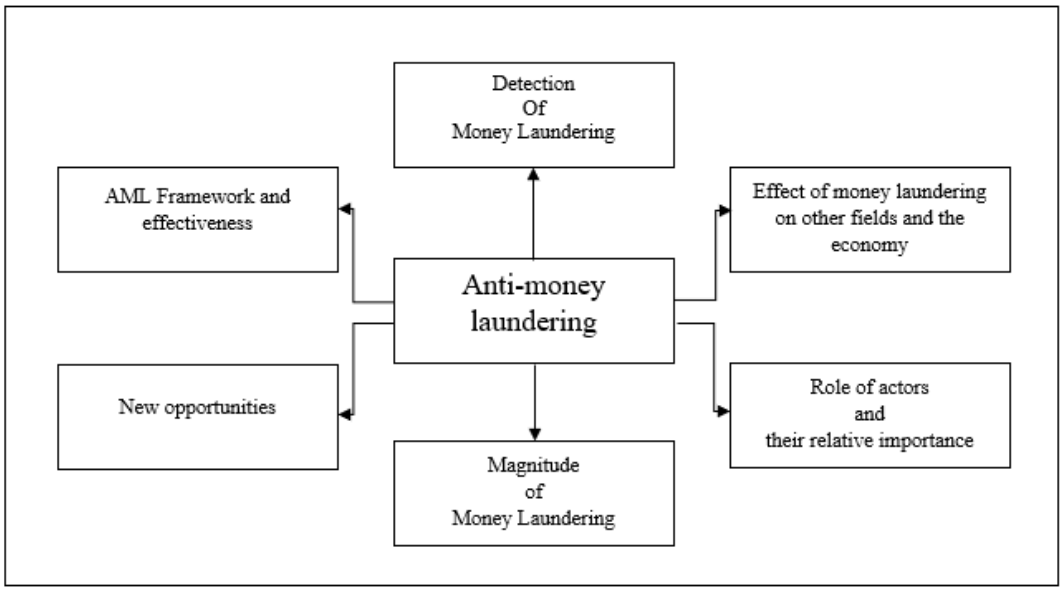

Figure 1, Categorisation of the AML literature, adapted from Tiwari, Keep & Kumar (2020, 275)

2.1 Detection of money laundering

Detection of money laundering is currently a duty that concerns financial institutions as well as other obliged entities in the form of suspicious activity reporting. Money laundering nevertheless can be detected by actors for example by a credit institutions, financial institutions, auditors, accountants, art dealers, real estate agents, management, and individuals. These actors must report forward the detected suspicious behaviour to the national FIUs, which duty is to investigate these reports and hand over the results to enforcement, such as the national police.

It is in both researchers' and practitioners' current interest to enhance the use of software tools to detect laundering (Singh & Best, 2019, 1).

Currently, in academic literature, we have various techniques to detect money laundering (Shaikh, Al-Shamli, and Nazir 2021). The techniques used consist mostly of analytical tools and recognising anomalies or repeating patterns. Techniques in use include such as *clustering-based anomaly detection*, *rule-based systems*, and a *decision tree algorithm* (Shaikh, Al-Shamli, and Nazir, 2011). *K-means clustering* can be used to identify patterns in data sets (Hung, Wu, Chang & Yang, 2005). However, as Shaikh et. Al (2011) points out, the current techniques offer the possibility to detect suspicious activities and customers, but there is a lack of techniques to detect the relationships between these two factors.

One of the central actors within obliged entities is the compliance manager, who should operatively assure that the entity operations follow the rules and regulations. As in the EU´s 4AMLD, an obliged entity is required to have an AML compliance officer take into consideration the size and nature of the entity. In a quantitative survey on 200 compliance officers, Teichmann (2019, 244) finds that while 93-98% of the compliance officers in real estate and antiques rarely detect money laundering, only 32% of the compliance officers agree on this in the banking sector. This can be for two reasons or both. Firstly, the detection mechanisms in the more tightly regulated banking sector may more effectively detect laundering. Secondly, the banking sector could be more used for laundering. However, money launderers are known to favour less-regulated sectors (Teichmann, 2019). This would suggest that extensive regulation and monitoring of the banking sector detects a larger share of the laundering. Teichmann (2019, 241 also finds out, that the real estate sector and antiques are commonly used for laundering as less regulated sectors.

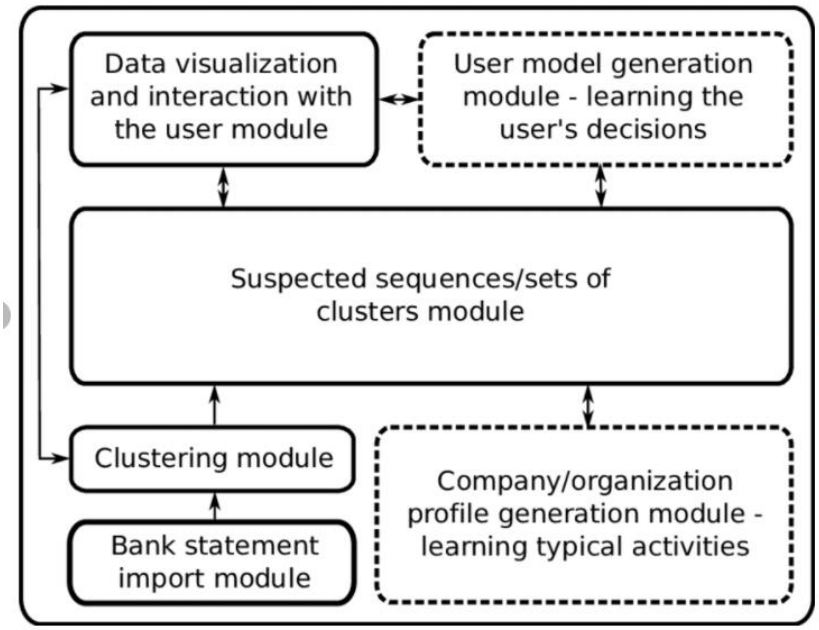

Figure 2 Drezewski, Rafal & Sepielak, Jan & Filipkowski, Wojciech. (2012). System supporting money laundering detection. Digital Investigation. 9. 8-21.

Deng, Joseph, Sudjianto & Wu (2009), proposed an active learning method with sequential design to improve the detection of money laundering. A common approach of financial institutions is to extract transaction history data based on chosen variables and conduct a closer investigation of the extracted data (Deng et. Al, 2009, 969), which is expected to have a higher likeliness of containing compromised transactions involved with ML. A similar approach using a cluster model to form profiles using bank statement data to identify suspicious accounts is visualised above in Figure 2. The extracted cases are processed in a time-consuming process, which can easily take 10 hours (Deng et. Al, 2009, 969). In the process, the investigators are identifying the case in terms: of what type of transactions are used, the number of transactions, the average amount of transactions, frequency of transactions, and other data about the customer to derive a conclusion if this case is suspicious or not (Deng et. Al, 2009, 969). One strategy to overcome the problem of extensive data is segmentation and risk prioritization (Deng et. Al, 2009, 970). Based on this we can cluster the accounts that are suspected to contain a higher risk of ML or higher risk of severity if the risk is realised. This could be visualised similarly as in Figure 3. The smaller clusters can further be analysed, and the very high severity cases prioritised.

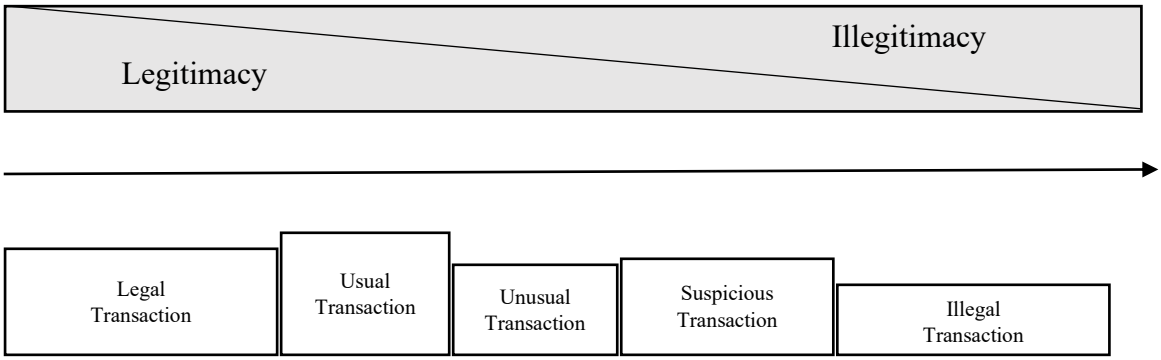

Figure 3 Continuum of transactional pattern by Gao & Ye, (2007, 172)

Gao and Ye (2007, 172) have made a classification of terms used as a part of suspicious action reporting, in which suspicious action is defined to consist of illegal activities with high likeliness. *Data mining* (DM); identifying patterns in large data, is used to detect ML and TF by trying to identify abnormal import/export prices in international trade (Gao and Ye, 2007, 173). According to Gao and Ye (2007, 173), DM can be used to lower the false-positive rates in suspicion reporting. Currently, suspicious reporting is playing a key role in detecting ML. Since the FIUs receive large quantities of these reports it establishes allocating more work hours to more serious cases that might need manual work. One of the most criticized aspects of suspicion reporting is the extensive number of reports, which is caused by the strict reporting criteria. ´. Financial institutions avoid the false positive errors for the heavy fines and therefore prefer extensive reporting (Gao, Ye, 2007, 174). This results in reported cases that are entirely legal and therefore create an unnecessary burden on the FIUs and the entities obliged to report. This problem of extensive reporting to avoid the risk of the true positive is referred to as ´the crying wolf´ Gao and Yen (2007, 174) argue that CDD should be used to identify behaviour patterns, not to collect background data. The importance of identifying the networks is because organised crime as a predicate offence is involved with criminal networks. *Link discovery, social network analysis,* and *graph theory* are often used as ML network analysis tools (Gao, Ye,2007). According to Gao and Yen (2007), there exist three kinds of network link analyses: manual, which cannot be used for large data sets; graphics-based, in which the network is so dense that it fills the area; and structural analysis. Ngai, Hu, Wong, Chen & Sun (2010, 563), categorise DM techniques that can be used to detect

financial frauds as classification, clustering, outlier detection, prediction, regression, and visualisation. Inside the categories, there are common analytical tools such as neural network, regression model, naïve Bayes, decision tree, fuzzy logic, CART, genetic algorithm, and k-nearest neighbours.

Suspicion reporting	ML	No ML
Reporting	True positive	False-positive
No reporting	False-negative	True negative

Table 1. Suspicious Activity Reporting by Gao & Ye (2007, 175)

In reporting activities possibly compromised by ML, false positives and false negatives should be minimized for the reporting to be as effective as possible (Table 1). Wedge, Kanter, Veeramachaneni, Rubio & Perez, 2017,7) state that in detection data 4 out of 5 is due to false positives. They presented a machine learning model that was able to reduce false positives by 54% in the sample data of 1,852 million transactions. In machine learning, they used features such as the mean of the transaction amount, the standard deviation of the transaction, the average time between transactions, the number of unique transactions, merchants, countries, and the number of currencies used in transactions (Wedge, Kanter, Veeramachaneni, Rubio & Perez, 2017,7). Process mining combined with red flag indicators has been offered as a solution to tackle the problem of false positives (Baader and Krcmar, 2018, 3).

According to Gao & Ye (2007, 177) by using power-, cohesion- and role analyses it is also possible to identify central members, subgroups, and inter-/intra group relationships. This is not done so much to detect ML but to analyse how an ML network can be *destabilised* by allocating the operational measures into crucial places in the network.

A different approach that could be potential for detecting entities conducting ML was introduced by Ravenda, Argiles & Valencia-Silva (2015). They created a logistic regression model to identify legally registered Mafia firms (LMFs) based on earnings management proxies, real activities manipulation, and other financial variables. The study found the detection model to be 76,41% accurate in detecting whether the firm was a mafia firm or a legally operating firm (Ravenda, Argiles & Valencia-Silva, 2015, 11).

From the aspect of money laundering detection, this is interesting because Mafias as organisations are known to put forward illegal operations, which furthermore create income. Therefore, classifying these firms could be an option on how to allocate efforts to detect larger networks of money laundering as these criminal organisations are known to operate sophistically and on large scale. In many cases, a single non-legitimate transaction appears to be like any other transaction (Benson, 2016, 205). The last trend has been how to prevent, detect and investigate money laundering that takes place in the digital world. Cryptocurrencies are a valid example of this kind of environment.

2.2 Effects of money laundering

The effects of money laundering have been studied from various perspectives. According to a study on academic literature conducted by Ferwerda (2013, 36), the literature can be categorised: based on the type of effect it has; economic, social, or political; and based on the sector it affects; real, financial, or public and monetary. Additionally, the observed effects can be divided based on their lifespan, whether it is long- or short-term (Ferwerda, 2013, 36). The AML efforts combined are far-reaching and extensive, which is why studying these effects unwanted or not, is important.

Barone & Masciandro (2010) proposed a dynamic model to simulate the total amount of legal wealth generated by organised crime through drug trafficking and relationships between organised crime, money laundering, and legal investments. According to Barone & Masciandro (2010), laundered funds are used in three ways; to invest in illegal businesses, to invest in legal businesses, and for consumption. From these activities it is not difficult to see the harmful effects this has on the legal sector in form of distorting competition through interfering with the demand and supply of goods and services, but also distorting possible competitive tendering as companies with shadow incomes can make more competitive offers than their legally operating competitors. For organised crime, networks are often a vital part of the operations, and to maintain continuity, it is important to uphold that network. The laundered funds can keep up companies that would not otherwise be able to operate on the market and corruption can be used to silence external threats. It is not uncommon to invest the laundered funds in a seemingly legitimate company that is involved with the laundering process. Further profits can be gained from investing for example in the stock market, which also distorts stock prices through increased demand, but investments can be similarly done in illegal markets to fund further illegal operations (Singh & Best, 2019, 1), which may threaten the integrity of the financial system.

The banking sector is naturally one of the most affected industries by AML regulation for its role in detection. The AML regulation creates costs of implementation and compliance in the banking sector and decreases the efficiency of banks (Masciandro, 1998). Therefore, there exists a trade-off between the AML regulation and the efficiency of the system (Masciandro, 1999, 231). Furthermore, banks may be fined or prosecuted for non-compliance. The question of whether state intervention is effective, irrelevant or harmful as (Stigler, 1964) proposes,

remains highly debatable. ML in itself is not necessarily harmful to the banking sector as launderers would possibly represent another high-value customer for the banking sector without AML regulation. This was demonstrated by the HSBC bank, which systematically took deposits and allowed the penetration of the financial system knowing the deposits likely included criminal proceedings. The scandalous case gained media and academic attention between 2015-2018 (Huang, 2015; Naheem, 2015, 2018; O Sullivan, 2016 etc.)

Schwartz (2011) studied the relationship between money laundering and tax havens and found complementarities between the two. According to Schwartz tax havens might be uncooperative to implement regulations that might hurt their business models (Schartz, 2011, 46). However, tax havens do not seem to differ significantly from non-tax havens in their AML regulation (Schwartz, 46).

Unger et al. (2006) conducted a study funded by the Dutch Ministry of Finance. The study discusses the effects and the volume of money laundering with a specific focus on Denmark. Nevertheless, the study includes a literature review from academic sources in which different effects of money laundering are listed with adequate references to the original studies. The different effects are then classified in a table based on which sector they affect, is the effect direct or indirect, and whether the effect is considered to be short- or long-term (Unger et al., 2006, 83-101). As a summary of the study based on sectors, the effects on the real sector are such direct effects of the crime in terms of gains and losses (Boorman & Ingves, 2001, 9), distortion of consumption (Barlett, 2002, 19), distortion of investment and savings (Aninat, Hardy & Johnston, 2002, 1; Bartlett, 2002, 19), artificial price increases (Allridge, 2002, 314), changes in demand of money and exchange rates (Allridge, 2002, 314), unfair competition; this is quite self-explanatory, changes in imports and exports (Bartlett, 2002, 18-20), lower growth rates (Aninat, Hardy & Johnston, 2002, 1; Bartlett, 2002, 18-20) and effect on output; income; and employment (Bartlett, 2002, 18; Boorman & Ingves, 2001, p 8). As effects on the public and monetary sector (Unger et al, 2006, 83-100) are lower revenues for the public sector (Alldridge, 2002; Boorman & Ingves, 2001, 9; a threat to privatization (McDowell, 2001, 4; Keh, 1996, 11), changes in the demand for money, increased volatility in exchange rates and interest rates (Bartlett, 2002, 18; Boorman & Ingves, 2001); greater availability of credit (Tanzi, 1996, 6), potentially higher capital inflows and changes in foreign direct investment (Boorman & Ingves, 2001, 9). Recognised possible effects on the financial sector are (Unger et al, 2006, 83-100) risk for the financial sector; solvability and liquidity (Allridge, 2002, 310; Aninat, Hardy & Johnston, 2002, 1; Camdessus, 1998, 2;

Tanzi, 1997), profits for the financial sector (Allridge, 2002, 310), the reputation of the financial sector (Aninat, Hardy & Johnston, 2002, 1; Bartlett, 2002, 19), illegal businesses contaminate legal businesses (Allridge 2002, 315, Camdessus, 1998, 1-2; Van Duyne, 2003, 76), corruption and bribery (Allridge, 2002, 308, Camdessus, 1998, 1, Van Duyne, 2003, 76). In addition (Unger et al, 2006, 83-100) are effects such as increases in crime, distortion of economic statistics (Allridge, 2002, 306) and an increase in terrorism.

It has also been pointed out that as a costly activity, the costs of AML potentially decrease the efficiency of the financial system. Therefore there would exist a trade-off between increasing AML efforts and the efficiency of the system.

2.4 Magnitude of money laundering

What is the global magnitude of money laundering? This question has seen attention ever since the introduction of AML policies. This has been about the justification of costs caused by applying AML policies in public and private entities (Ferwerda et al., 2020, 2). To justify the costs, we need to know how extensive the threat is if we do not. An accurate estimation of the magnitude gives an insight into proper response in policy measures. The development of an accurate estimate establishes that we could estimate the macroeconomic effects and impact of preventive measures and regulations on ML (Unger & Walker, 2009, 821). If we consider the costs of AML, we could also try to estimate the cost-effectiveness of the policies or the framework. For example, Anand (2011, 71) argues, that extensive Cost-Benefit Analysis (CBA) is needed to evaluate the effectiveness of the national Anti-Terrorist Financing regime in Australia because even a shallow CBA suggests the regime to be not cost-effective. The irony in the task of measuring money laundering magnitude is to measure something that is aimed to be hidden. For this reason, there is no easily accessible statistic to measure the phenomenon (Ferwerda et al, 2020, 1). There have been several attempts.

The Director of the International Monetary Fund, Michael Camdessus stated in a FATF meeting in 1998 that the amount of money being laundered is between two and five per cent of global Gross Domestic Product (Camdessus, M., 1998). This remains a lot referred estimate also in an academic context. According to Barone & Masciandro (2010, 117) and Walker and Unger (2009), the background has never been released on how the IMF produced the estimation of global money laundering being 2-5% out of global annual GDP. Despite this, the estimation is provided in countless academic articles as an estimation of the volume. The estimate should be treated with caution (Singh & Best, 2019, 1). Wide usage of the methodologically unspecified 2-5 % estimate reflects the underlying lack of reliable estimates. The criminal sector does not have laws nor are activities listed or registered, yet this is information is centric in estimating the size of the sector (Barone & Masciandro, 2011, 115). According to Barone & Masciandro (2011, 116), most research on ML is purely speculative, figures are unreliable, and the magnitude estimates underestimate the phenomenon.

Since ML is not a phenomenon that data cannot be directly collected, most often the amount is estimated using different proxies which link to international capital flows, money demand,

feeder activities, confiscations, size of the informal sector/shadow economy, and errors and omissions of the balance of payments. In the academic world, Walker (1999) was the first to official attempt to analyse the magnitude of money laundering. He estimated through a crime-economic model that the total amount of money laundering would be around $2,85bn per year (Walker, 1995, 2002) and concentrates in Europe and North America (Walker, 1999). The model has received critique for the lack of empirical foundation and that it does not differ the types of money laundering (Ferwerda, 2020, 1). The Walker´s gravity model was later used as revised by Unger & Rawlings (2008) to estimate the volume of ML in the Netherlands. Barone & Masciandro (2011, 117) stated that neither the Walker model nor the IMF estimate could not be reproduced due to low disclosure of the methodology. Nevertheless, these are widely considered to be the best estimates, which leaves to desire. Walker and Unger's models were later used by Ferwerda, Kattenberg, Chang, Unger, Groot, and Bikker (2011, 1-8), to estimate illicit money flows in their study, which estimated the amount of TBML using Zdanowicz´s (2009) data sample of TBML flows and applying gravity models from international trade theory

Argentiero, Bagella, and Busano (2008) introduced a new methodology for measuring ML, which estimated the amount to be around 9 % in Italy from 1980-2001. The model was a dynamic two-sector model, which was used to predict the growth of illegal and legal sectors under optimality conditions (Argentiero, Bagella, and Busano, 2008, 341). Barone & Masciandro (2011, 117) criticized the study for measuring underground economy rather than specifically ML, which they pointed out to be a close yet distinct phenomenon. Considering a decade of research, this is not convincing (Unger, 2013, 10). Schneider (2010) created another dynamic model. This was a multi-indicator that used variables "crime and bank secrecy" and variables "money demand and convictions". These variables were assumed to be dependent on ML magnitude, but independent of each other (Schneider, 2010). The strength of the model is it can measure trends instead of simple points in time (Unger, 2013, 9).

Chong & Lopez de Silanes (2006) estimated the magnitude of ML using discrepancies between the official macro series and an estimated one. They used multiple methodologies and divided ML proxies into three categories. The first group of measures was made up of international capital movements in the form of foreign deposits, complemented with measures like the balance of payments errors and omissions, and standardized measures of the number of 5-star hotels and drug seizures. The second set of quantitative proxies was in

line with earlier research that discusses the relationship between the size of the informal sector and illicit activities in each jurisdiction. Subjective estimates from opinion surveys on the prevalence of money laundering across countries make up the third set. In their result section, they concluded ML to be related to the AML regulation with an emphasis on criminalizing feeder activities, improving confiscation, and enhancing disclosures from financial institutions (Chong & Lopez De Silanes, 2015).

Other similar approaches to measuring the magnitude of ML have been presented by Zdanowicz (2009), Baker (2005), Ardizzi; Petraglia; Piacenza; Schneider; and Turati, (2014), but according to Ferwerda, van Saasel, Unger & Getzner (2020, 1), Walker- and Unger models have been the most promising attempts of measuring the phenomena, though the models have received a critique on lack of empiricism and the ability to distinguish properly between domestic and international ML.

3. WHAT IS MONEY LAUNDERING?

3.1 Definition

Defining money laundering has been problematic in regulation when compared to practice. This has been the result of differences in national legislation. It is not that the term itself is hard to define but the fact that countries have defined differently what is and what is not considered money laundering. For example, in the Netherlands, having illicitly gained funds and having them in possession is considered money laundering (Ferwerda, van Saas, Unger & Getzner, 2020, 3). On the other hand, in many other countries, the definition has more characteristics of disguising the illicitly gained funds and concealing. In Finland for example, criminal law distinguishes concealment and money laundering as separate offences. (Criminal Law of Finland, 1889/39, 32§). A crime that meets the criterion of concealment does not necessarily meet the criterion of money laundering although money laundering has characteristics of concealment most often.

From a regulative perspective, money laundering is defined in the EU´s 5th money laundering directive as follows:

> *(a) the conversion or transfer of property, knowing that such property is derived from criminal activity or from an act of participation in such activity, for the purpose of concealing or disguising the illicit origin of the property or of assisting any person who is involved in the commission of such an activity to evade the legal consequences of that person's action;*
>
> *(b) the concealment or disguise of the true nature, source, location, disposition, movement, rights with respect to, or ownership of, property, knowing that such property is derived from criminal activity or from an act of participation in such an activity;*
>
> *(c) the acquisition, possession or use of property, knowing, at the time of receipt, that such property was derived from criminal activity or from an act of participation in such an activity;*
>
> *(d) participation in, association to commit, attempts to commit and aiding, abetting, facilitating and counselling the commission of any of the actions referred to in points (a), (b) and (c).*

As (Unger et al. 2020, 3) point out the legal definitions of money laundering are usually very broad. Their coverage is extensive as is in the case of the definition of the ML in the EU´s 5th anti-money laundering directive (5AMLD). It covers a very wide set of situations. If the text is interpreted word-to-word it would theoretically mean, that even an attempt to commit the possession of an asset of any kind, when known to have an illicit origin, would fulfil the criteria of money laundering. In practice, this kind of definition is problematic and leads to differences when countries can use their discretion in the implementation of the standards. One of the main problems standing in front of defining money laundering is, which crimes are counted as predicate offences (Teichmann, 2019). This remains a question with no uniform answer despite harmonisation. It has been observed to cause problems in form of countries not necessarily recognising or acknowledging legal aid requests of other countries (Hyttinen, 2021,49). As Unger et al. (2014, 87-96) observe in their study, there is a considerable divergence between the EU Member States in the actual practices, defining what is ML. This observation stems from observing regional workshops on AML, where participants worked on cases, and they were required to define if the presented situation would be counted as money laundering in their country (Unger et. Al, 2014, 87-96). 6AMLD addressed this problem aiming at further unifying the list of predicate offences of money laundering among EU members. Broadening of the definition is also problematic because changes in the definition change what we understand as *"money laundering"*. It becomes increasingly difficult to distinguish money laundering as a phenomenon from predicate crimes when broader and broader definitions make it applicable whenever there exists a criminal proceeding. This links to the question of whether it is possible in some cases to even avoid committing the subsequent crime of money laundering. As Van Duyne argues, in case of definition this broad, laundering prosecution can be avoided by either immediate destruction or giveaway of the proceedings or by turning oneself in (Van Duyne, 2003, 71). Including new predicate offences also changes the relations of measured estimates of the phenomena and their comparativeness, since ML is increased by broadening definition.

3.2 Laundering cycle

Money laundering is a series of efforts that are done to hide the nature or origin of illicit funds and integrate it into the financial system without drawing the attention of law enforcement. These efforts together are described as the "cycle" of money laundering (Fig.X). This cycle is divided into three phases: placement, layering, and integration (Yen, 2005, Buchanan, 2004, 112). The first phase is preceded by the so-called "predicate offence". These are the crimes, through which the criminals gain the access to the funds in the first place and thus make the funds illicit. According to IMF these primary crimes are profit-orientated and include crimes such as corruption, drug trafficking, market manipulation, fraud, and tax evasion (IMF, 2020). All of these are serious crimes and hold the potential to cause negative side-effects on the economic, political, and social scale. The predicate offence can also be something less severe like embezzlement or theft. After the predicate offence, the funds are placed inside the financial system. The most basic technique to achieve this placement goal is via bank deposits.

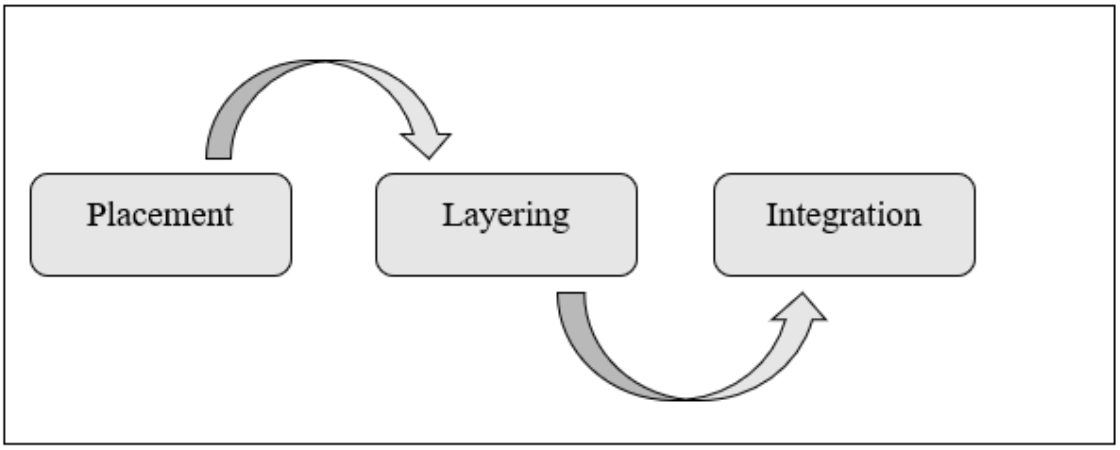

Figure 4. Laundering cycle

Alternatives exist for example, corporations can be used to deposit the cash in, or check-cashing businesses can be used to convert cash to traveller's checks, cashiers, and money orders (Buchanan, 2004, 117). Another way is to use cash to purchase valuable assets such as land, property, or luxury items (Irwin, 2012, 322) Money launderers are known to use various techniques and differentiate the amounts laundered (Irwin, 2012, 322). This is done to avoid the attention of law enforcement or tax authorities. If a launderer would place twenty cash deposits of 50,000$ into the same bank account on the same day, it probably would raise questions and the bank would be obligated to file a suspicious activity report to the national FIU due to exceeding the threshold limit. On the other hand, if the launderer is more sophisticated, he could; decentralize the deposits by variating the deposit amounts and dates

of deposit, make smaller deposits; use different currencies, use different banks in different countries exploiting the lack of transnational communication with authorities, use multiple different bank accounts and different identification when opening the account. Increasing complexity substantially increases the difficulty of detecting these transactions. This type of money laundering technique, in which the launderer diversifies the deposits into smaller amounts while exploiting the geographical regulatory and communicative asymmetry, is commonly known as "*smurfing"* (Hayes, 2021).

The placement is followed by the second phase, layering. In this phase, the illicit funds are already within the system. The goal is to disguise the source of the funds to make it hard to trace what is the origin of the funds. This is done by creating complex layers of financial transactions (Yeandle et. Al. 2005; KRP, 2016; Buchanan, 2004, 117; Irwin, 2012, 322). What happens is that the funds are circulated in the financial system to create the "layers" of transactions. One of the common strategies is to blend the illicit funds with transactions that are funded partially with legal money. Launderers might for example use 10,000$ of the funds perceived by crime and blend it with 10,000$ to buy a piece of art such as a painting. The painting is then sold further in an auction with a selling price of 22,000$. The funds are used to purchase Bitcoins worth 22 000$. Virtual currencies being highly speculative and therefore volatile the worth of the investment increases by 200%. Launderer sells Bitcoins, and the funds are transferred via bank transfer to a country with strong bank secrecy. Funds are further invested to buy shares of an offshore company with 66 000$.

In the last phase, integration, the goal of disguising the illicit origin of the funds is achieved by layering, and the funds can be used as a part of the legal economy without being traced back to the crime. In our example, the shares are sold and the funds with profits are used for the construction costs of a villa in Italy.

3.3 Techniques

There exist a lot of ways to launder money, and the new technology and asymmetries in operative policies and regulation create exploitable possibilities for launderers. What are the similarities between the distinct types of laundering? The first factor is hiding the criminal proceedings so that no official authorities can get to them. The second factor is, that if they are found, the authorities should not be able to link them back to the beneficial owner

(Teichmann, 2019, 241). The methods used can be categorized into domestic and international laundering methods (Ferwerda et. al, 2020, 3).

Domestic methods include using cash-based industries to slowly circulate the money through the cash registers (Ferwerda et. al, 2020, 3), by adding cash in and making an entry into books by using for example sales account. Common cash-based businesses to exploit include but are not limited to fast food outlets, launderettes, night clubs, car wash facilities, convenience stores, restaurants, taxi companies, car parking, tow companies, travel agents, market stalls, vending machine operators, and tanning salons (Gilmour, 2015, 6). The obvious limitation of domestic laundering through cash-based industry is to have large enough volumes to hide illicit transactions. Vice versa if the assets are derived from small-scale drug trades it might be very low maintenance to false a dozen invoices. The domestic techniques have a common feature to have the funds within the country.

International money laundering on the other hand is done by circulating illicit funds through different countries, offshore companies, and banks with a high level of bank secrecy. Various techniques for international laundering include structuring, front companies, miss invoicing, shell companies, wire transfers, mirror image- trading, and parallel systems such as Hawala banking (Buchanan, 2003, 118-121). Other mentionable ways to launder money internationally are hard-to-trace financial instruments, smuggling the funds over borders, and trade-based money laundering (Ferwerda et. Al, 2020,). Trade-based money laundering is a common term for "criminal proceeds that are transferred around the world using fake invoices that under- or overvalue imports and exports" (Ferwerda, Kattenberg, Chang, Unger, Groot, Bikker, 2011). TBML is considered a relatively unknown form of crime that is used to let illicit money pass borders unnoticed (Ferwerda, 2011). Techniques used in TBML include mispricing, bogus real estate deals, false invoicing, secured loans, reverse laundering, leveraged buyouts, valuation, false descriptions, and phantom shipments. In money laundering schemes, the launderer´s creativity and the knowledge of weaknesses in the AML system are the limitations (Naheem, 2015). When choosing the methods, it has been shown that money launderers prefer less regulated sectors (Teichmann, 2019, 244). In this manner, especially convenient items are high-value portable commodities that do not leave digital traces (Gilmour, 2015, 8). In international laundering, the most high-risk action is considered to be the first deposit (Ferwerda et al., 2020). This is why the operational AML duties lie heavily on customs authorities, law enforcement, and banks. Especially banks are seen as current bottlenecks of laundering activities. Another high-risk situation is avoiding border

control during the transportation of the assets. This is of course highly dependent on what form the assets are transported. With more recent development due to blockchain technology, the role of cryptocurrencies is expected to evolve with the changes in the regulatory environment. Large-scale money laundering is not expected to be a major significant change, since the work on the traceability of cryptos increases, and the operators are required to apply tighter KYC measures (Chainalysis, 2019, 24). However, it is speculated that they will be most likely exploited by small-scale criminals to launder criminal proceedings, (Chainalysis, 2019, 24). As pointed out by Malm & Bichler (2013,1), most launderers are self-laundering the proceeds and launderers do not usually have a leading role in the network of illegal operations.

The benefit of employing an international money laundering method is that foreign authorities are often less aware of the criminal and his actions; nevertheless, the drawback is the risk of detection at the border or at the bank where the money is originally placed. As a result, a money launderer's initial decision is whether to adopt a domestic or foreign money laundering approach. (Ferwerda et. Al, 2020). For a more comprehensive list of different methods familiarise yourself with the example Compin (2008).

4. AML FRAMEWORK

In this research anti-money laundering (AML) is defined and understood as a system, which includes the regulatory framework, actors working on the matter, and the actions related to it to prevent money laundering. The AML field consists of actors from various levels including local, national, and international level actors. Key actors on the international level are United Nations, Financial Action Task Force, and Basel Committee. In addition, the European Union is a major influencer of AML regulation in Europe. The aim and role of these international entities is to harmonize the regulation between member countries as well as to enhance and deepen the international cooperation among them to control the problem of money laundering. The basic methodology used to fulfil this aim includes supranational conventions such as the UN conventions and FATF´s 40 recommendations and creating networks for cooperation such as Egmont Group or FATF. National level actors on the other hand are meant to handle the problem on a country level. For example, banks are expected to comply with the given recommendations and standards, national FIUs are expected to investigate the suspicious activity reports that they receive among other intel, and legislators are expected to implement the international requirements as a part of national legislation. At last, the local level actors hold the duty to file a suspicious activity report (SAR) to the national FIU if they suspect that money laundering is taking place. The operational duty of the regime lies heavily on customs authorities, law enforcement, and banks. One of the goals when creating this supranational AML regulation has been to develop such norms to which as many as possible can commit because even one member can wreck the effectiveness of preventive AML measures (Hyttinen, 2021, 7). Within the EU material norms have been harmonized, but the norms of the enforcement instruments have been left to the Member States. This has resulted in a wide variety of enforcement mechanisms in the Union (Van den Broek, 2011). As asymmetries exist, there is a risk of exploitation.

From a theoretical point of view, the regulation of ML can be divided into repressive and preventive regulation. Repressive refers to criminal law which is used to punish laundering and confiscate the proceeds of crimes (Hyttinen, 2021, 9), whereas preventive regulation consists of norms aimed at preventing the crime to take place. Bergström, Helgesson & Mörth (2011, 1044) point out, that the AML regulation in the EU has strengthened the position of for-profit private actors in the public sector and question the effect of the shift

through the lens of legitimacy. The classic starting point would be that there is a clear distinction between the public and private sectors. The borders are blurring, and it raises the question about the actualisation of accountability when the private sector is given duties originally belonging to the public sector. Svedberg, Helgesson & Mörth (2016, 2) refer to these duties as forced extended responsibility from the state. This is a matter that also concerns all the obliged entities as regulative requirements -especially compliance with the FATF standards, create unavoidable operational costs.

In general, it can be said that money laundering regulations have been stricken, and the number of involved actors increased (Unger & Hertog, 2012, 287). AML framework has evolved into a complex system consisting of numerous actors nowadays if obliged entities and regulation of distinct levels globally are included. What are the separate roles of actors and what is their relevance in preventing money laundering?

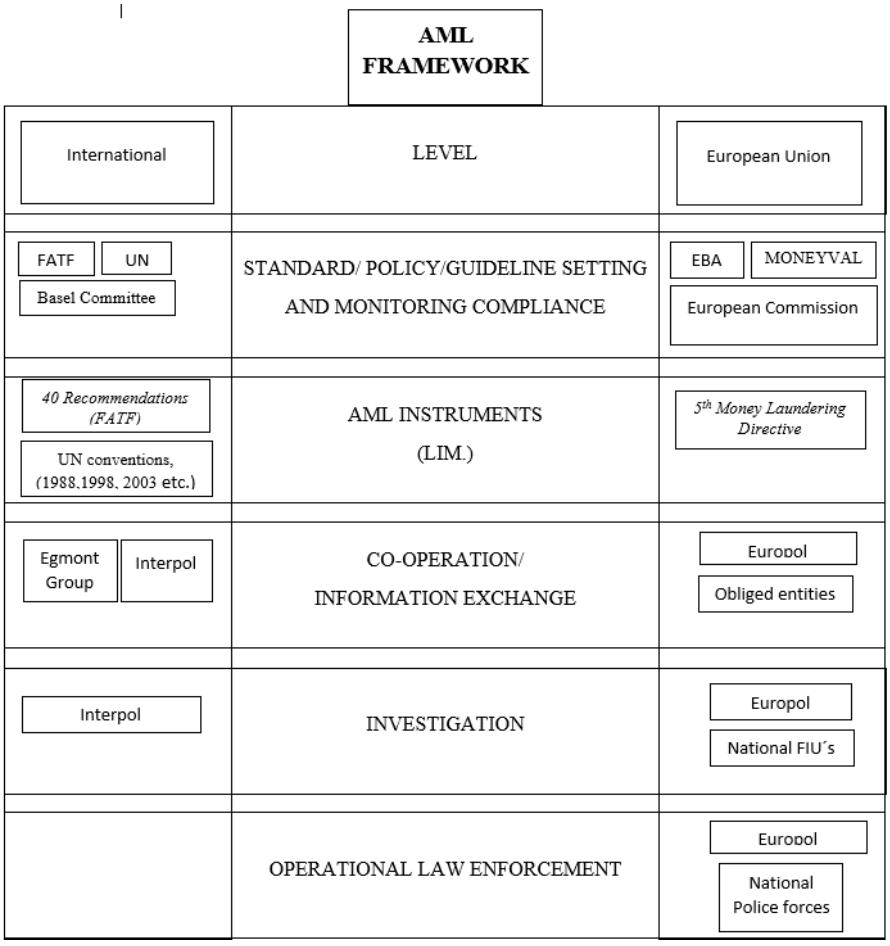

Figure 5 Categorisation of the actors within the AML Framework

4.1 International actors

Anti-money laundering as a phenomenon often crosses the limitations of national borders as international cooperation is seen currently as a crucial aspect of effective countermeasures to money laundering. Therefore, many of the national entities have formed networks among their equivalents abroad in a form that has either structural body and can be identified as organisations as themselves or another common set up is to have a looser co-operation with a platform for changing information. Next, we introduce some of the current international, and later European actors in the field as means to show what type of organisations and actors are involved in the AML effort. Figure 4 on the previous page can be used to organise these different entities.

The Financial Action Task Force (FATF) is one of the major international organisations fighting against money laundering and terrorist financing. It was established by the G7-Summit in Paris in 1989 as an action against growing concerns about money laundering (FATF, 2021). FATF recognises itself as the global watchdog of money laundering and terrorist financing (FATF, 2021). In practice, it is an inter-governmental body that comprises 39 members, including European Commission (EC) and the Gulf Co-operation Council as regional organisations (FATF, 2021). The role of FATF in the international picture is to keep up with the development of money laundering techniques and trends and develop standards aimed at countering the monitored techniques used to launder money and therefore preventing this illegal activity or at very least, making it less tempting. FATF's current approach is a risk-based framework which lies heavily on recognising the risks of ML and responding accordingly. Proper measures are communicated through FATF standards, which members ought to implement.

The standards published by FATF are 40 Recommendations. The standards were adopted on 16 February 2012 and last time amended in 2020 (FATF, 2020). The standards set requirements for the members concerning the level of legal, regulatory, and operative measures on members (FATF, 2021). The 40 recommendations are on a global level the leading instrument in the fight against ML and responsible for most of the active requirements such as KYC, CDD, compliance officers, PEP lists, and beneficial ownership records. At a country level, FATF supervises these measures with *mutual evaluations*, which are peer reviews that aim at analysing the state of a member country´s compliance with the

recommendations as well as its effectiveness. If the countries do not implement the policy standards set by FATF, they face the possibility of being blacklisted as the FATF maintains a so-called "blacklist" of countries considered not to be cooperative in the global efforts against ML (FATF, 2021). Ending up on the blacklist will result in serious negative economic consequences (Unger & Hertog, 2012, 287). However, the effect seems to be temporary as it was studied whether a stigma effect exists between FATF blacklisting and pulling the blacklisting back by analysing cross-border capital flows (Balakina, O., D'Andrea & A., Masciandaro, D., 2016). According to their findings, it does not exist (Balakina et al., 2016).

FATF has been criticized to have not paid concern to the consequences of its action requirements, which can be observed in the lack of adequate cost-benefit analysis on implementation and maintaining compliance with the requirements (Hyttinen, 2021, 40). This is the case despite the expansion of regulatory requirements, which tie up a significant amount of public and private resources (Hyttinen, 2021, 40). It is not clear whether implemented regulation projects have been efficient (Hyttinen, 2021, 40).

Egmont group as an organisation is another cooperation body, consisting of 166 national FIUs (Egmont Group, 2021). It serves as a platform for information exchange and promotes international cooperation against money laundering and terrorist financing. One of the core functions of the Egmont Group is that it facilitates Egmont Secure Web, which allows Heads of the Financial Intelligence Units (HoFIUs) to communicate daily to share information (Egmont Group, 2021). Another function is the working groups which are designated to work under narrower subtopics. At the moment there exist four groups: Information Exchange on Money Laundering/Terrorist Financing Working Group (IEWG), Membership, Support, and Compliance Working Group (MSCWG), Policy and Procedures Working Group (PPWG), and Technical Assistance and Training Working Group (TATWG). These working groups aim at enhancing the information exchange, monitoring that the standards are applied among the members of the group, developing operational policies, and offering technical assistance (Egmont Group, 2021). To conclude, the actions taken are meant to increase the effectiveness of the member FIUs as well as to make the Egmont Group collectively more effective.
In addition, and similarly to the FATF, the Egmont Group has "observer" organisations. The criterion for the observer is to be a non-profit governmental or intergovernmental organisation, which has a role in AML/CFT and can contribute to supporting Egmont Group objectives (Egmont Group, 2021). Observer organisations include multiple well-known

actors such as MONEYVAL, Europol, European Commission, IMF, World Bank, and United Nations Office on Drugs and Crime (Egmont Group, 2021).

International Criminal Police Organization (INTERPOL) is an intergovernmental police organisation. INTERPOL has 194 member countries and its function of it is to enable sharing and access of data on crimes and criminals within the member countries. According to the Finnish National Bureau of Investigation, it serves a significant role as means of multilateral information exchange and international cooperation (NBI, 2020). In addition, INTERPOL hosts seminars on money laundering topics (NBI, 2020). In the frame of AML, INTERPOL is an international cooperation organ of law enforcement. As the international operational environment is increasingly global international cooperation has an important part to serve.

The well-known United Nations was founded during World War II in 1945 when the United Nations Chart was signed by 50 countries (UN, 2021). Since those days, the amount of member states has increased to a total of 193 (UN, 2021). The most significant achievements of the UN concerning the AML efforts are international conventions; Vienna Convention, UN Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances in 1988; Palermo Convention, UN Convention Against Transnational Organised Crime in 2001; and Merida Convention, UN Convention Against Corruption in 2005.
Vienna Convention was signed as an answer to internationally increasing concern about drug trafficking and the illicit funds related to entering the financial system (Schott, 2006, III-2-3). The main achievement was defining the concept of money laundering and demanding member states criminalise the activity (Schott, 2006, III-3). The major limitation was that because the convention was designed as an instrument to fight against drug trafficking, it did not recognise any other predicate offences for money laundering other than drug trafficking offences (Schott, 2006, III-3). It was, nevertheless, a step in the right direction.

Palermo Convention filled a lot of the gaps left in the Vienna Convention from the perspective of anti-money laundering in 2000. It was designed to fight specifically against organised crime. It obligated each country to; criminalise money laundering and include as predicate offenses all serious crimes (UN, Article 6, 1-2); establish a regulatory and supervisory regime for banks and non-bank financial institutions and other bodies to deter and detect all forms of money-laundering, while emphasizing requirements for customer identification, record-keeping and the reporting of suspicious transactions, record-keeping and reporting of suspicious transactions; (UN, Article 7, 1a); ensure that administrative,

regulatory, law enforcement and other authorities combating money-laundering have the ability to cooperate and exchange information at the national and international levels and shall consider the establishment of a national financial intelligence unit (UN, 2000, Article 7, 1b); in establishing a domestic regulatory and supervisory regime, States Parties are called upon to use as a guideline the initiatives of regional, interregional and multilateral organizations against money-laundering; and States Parties shall develop and promote global, regional, subregional and bilateral cooperation among judicial, law enforcement and financial regulatory authorities to combat money-laundering (UN, 2000, Article 7, 3-4). The contents of the preceding articles in the Palermo Convention have remained relevant and are part of the very core foundation of AML.

Lastly, worth mentioning is the Basel Committee on Banking Supervision (BCBS), which is a global standard-setter for the regulation of banks and provides a forum for regular cooperation on banking supervisory matters (BCBS, 2022).

4.2 European actors

European Union is probably the single most important actor in the European context when considering AML. The role of the European Union is to improve and harmonise the AML efforts within the member states and to protect the financial system from being used for illegitimate purposes. The main tool to accomplish these measures for the EU is through regulation and deepening cooperation on the matter. Within the EU the member states give the mandate to European Union and therefore indirectly to entities within the EU to develop integrated measures against ML in form of directives and operational policies. Money laundering as a phenomenon is known to cross national borders and the launderers are known to exploit asymmetric weaknesses within different national frameworks. From this perspective, a unified approach to AML is the one that gives supposedly the most coverage and overall effectiveness within the European Union. If all the member states have succeeded in the implementation of the directives and the operational activities of different entities reflect this, there should be no other weak links within the Union members. Therefore, the member states hold a crucial role in enabling of unified approach as well as enabling deepening the cooperation measures with other entities, which likewise is an important cornerstone. The first EU AML directive was adopted in 1991 (Council Directive

91/308/EEC). It required that obliged entities in the member states implement processes such as customer due diligence (CDD), transaction monitoring, and suspicious activity reporting (EU Commission, 2021). Since the adoption of the first directive there have been several others and in 2018 EU published the 5th anti-money laundering Directive. The deadline for implementing the contents into their national legislation was in January 2020. The 5th Directive included several amendments from the 4th directive which will be discussed later in the fifth chapter. To put it concisely, the 5th directive recognises fiat-to-virtual transactions, lowered the threshold for electronic money and prepaid instruments, increased registration requirements of crypto companies, considers art dealers and estate agents as obliged entities, added enhanced CDD requirements to transactions with high-risk third countries, made Ultimate Beneficial Owner (UBO) register publicly available, and obliged the member states to identify so-called politically exposed persons (PEP) to form a database. In addition to the directives, which seem to be the most used tool historically as well as currently, the European Union´s major conventions such as Warsaw Convention (Hyttinen,2021, 44) have been significant landmarks in criminalising money laundering and further defining what is money laundering. As we argue later in this paper, it is important that when facing a common threat, we have a unison of what is meant by it. In Warsaw Convention for example new techniques of money laundering were recognised as money laundering and confiscation of ill-gotten gains was extended.

As part of the risk-based approach European Union also maintains a list of high-risk third countries, which are categorised as having strategic deficiencies in their national AML/CTF regimes (EC, 2021). This is done as means of protecting the integrity of the EU internal market from ML. When dealing with identified high-risk countries, enhanced CDD measures should be applied to manage these risks (EU, 2018/843).

Until January 2020 the development of AML/CFT policies in the EU was shared with three separate entities: European Securities and Markets Authority (ESMA), European Banking Authority (EBA) and European Insurance and Occupational Pensions Authority (EIOPA). Since 2020 this mandate has been centralised to EBA, which now monitors the implementation and compliance with the EU AML standards within member states (EBA, 2020, 2). EBA is also designated with the task to foster cooperation and information exchange among all competent authorities affected by the AML regulation across the EU (EBA, 2020, 2).

Under the EU umbrella also operates The Committee of Experts on the Evaluation of Anti-Money Laundering Measures (MONEYVAL), which is a monitoring body of the Council of Europe (CoE) (CoE, 2021). It was established in 1997 and is trusted with the task of assessing compliance with the principal international standards and their effective implementation (CoE, 2021). This is aimed to achieve by carrying out mutual evaluations and peer reviews, which may cause follow-up based on the contents of the reports (CoE, 2021). This is an alternative evaluation process for the member countries that are not members of the FATF and under FATF mutual evaluations.

Europe also has its police enforcement, The European Police Office (Europol), which is a support service for the national law enforcement of the EU member states. It has no executive powers so it cannot carry on executive measures independently but can contribute to these matters if requested by the member state authorities (Europol, 2021). Europol admins FIU.net -platform in which financial intelligence units of the Union members can exchange information on filed suspicious activity reports. The fourth AMLD recognises situations in which sharing the information is considered mandatory.

On the lowest level and as a part of the groundwork are the obliged entities that as actors within the AML framework are obliged to implement and develop AML policies, procedures, and controls for their activities. These include CDD; enhanced CDD, when dealing with high-risk countries; reporting suspicious activities and keeping records; having a compliance manager; and training staff about AML (EU, 2015/84). In the 4th AML directive Article 2 of the EU the obliged entities are as follows: credit institutions; financial institutions; auditors; external accountants; tax advisors; notaries and other legal professionals, where they participate in financial or real estate transactions; all other trusts and company service providers; estate agents; any natural person taking part in a cash transaction exceeding 10 000 EUR threshold; and providers of gambling services (EU, 2015/84). The list is quite extensive, and it can be questioned how many of the natural persons as well as other actors are informed properly on what is expected from them in means of filling AML requirements.

Suspicious activity reports filed by obliged entities are processed in the national financial intelligence units, which investigate whether the reported events hold the risk of money laundering. FIUs within different countries are not identical but differ depending on how the government is organised. Commonly four distinct types are recognised: administrative, law enforcement, judicial and hybrid (IMF, 2004, 9-17; EU, 2017, 13; and Egmont Group, 2021).

5. WHAT IS EFFECTIVENESS?

Effectiveness concerns the rate at which outputs of action or organisation are converted into short-term outcomes and long-term impacts. From the point of effectiveness, we can measure the resources used in the activity and compare them with reached impacts. If we invest 1 euro in a cause, what are the impacts that we gain? What is the cost-effectiveness of this activity? How well do we turn allocated resources into real activities, how efficiently do these activities create measurable outputs and do these outputs turn into meaningful outcomes that create wanted long-term impacts? Investing in a cause has marginal utility. If the input is the same, we can expect diminishing returns. Though not for the same causes that it traditionally does. It is not about gaining utility from consuming, but it has to do with the dynamic nature of the phenomenon. First investments in the AML are probably the most meaningful if the volume is adequate since it forces the launderers to find new ways, which might not be as cost-efficient for them as it can be expected that the last used method was rationally selected for use. Then, how do you choose which laundering method to use? We can expect that laundering the sum Y has a cost C and the risk of getting caught, in which case there is a loss of Y added with fines D (Becker, 1968). We can then assume that there are multiple options on how to launder the money, which gives us multiple equations (Becker, 1968). If the launderer is a rational decision-maker, we can expect him to choose the option with the highest expected value of successfully laundered money. In the AML, what we can have an impact on is how costly the process of laundering is, how high is the risk of getting caught and what are the consequences of getting caught. Here is when the marginal utility problem comes in. If we consider the AML to be a net, the smaller the holes, the smaller the size of fishes that do not get caught. Nevertheless, making the holes even smaller to catch every fish comes increasingly costly, since the efforts must be significantly greater. Also, when we descend a net in a lake, we can expect the fishes to move into another lake with less risk of getting caught and the opportunity to operate on a bigger scale due to less monitoring. So, what we need is coverage over the drainage system with well-allocated resources to limit the flourishing of the phenomenon. Whether we put efforts into predicate crimes or money laundering is a two-sided sword. Predicate crimes precede money laundering. In our metaphor focusing on the predicate crimes is like limiting the food resources of the fish and focusing on money laundering is like catching the fish when they are indulging in their meal. We can focus on either one or it can be expected to affect the interest in the other. If we manage to decrease the number of predicate crimes, it subsequently decreases the number of

criminal proceedings. Likewise, making the proceedings harder and harder to use decreases the temptation of gaining criminal proceedings, since the purchasing power is only potential, not effective. Also, resources should not be allocated in a way that one way of laundering or laundering in some areas is almost impossible meanwhile the costs and risk of getting caught are practically non-existent using an alternative method or geographical area from where the laundered proceedings can be transferred to gain effective purchasing power. Coverage is crucial. Precisely, effectiveness is about taking actions that enable the input used to form outputs, which delivers wanted effects/outcomes that aggregate into overall effectiveness with a favourable ratio.

In addition, effectiveness can be understood differently. One characteristic that can be recognised to distinguish different approaches is the methodology of endogenous and exogenous effectiveness (Nance, 2017, 123). Endogenous understandings define effectiveness according to the more immediate goals of the institution. Exogenous understandings focus instead on the impact an institution has on larger problem members understand the institution as addressing. (Nance, 2017, 123) When applied to the case of AML endogenous effectiveness reflects the effectiveness of the implementation of AML regulation, whereas exogenous in contrast refers to the effect AML efforts have on money laundering as a phenomenon (Nance, 2017). As Nance (127, 124) pinpoints the current problem of the MERs, following the endogenous effectiveness measured in MERs:

"FATF might be perfectly effective at diffusing perfectly ineffective rules"

6. ANALYSIS

There is vast literature on the effects and challenges of AML in general. The table below presents the selected articles and is followed by the actual review.

Concepts								
Author	Year	Keywords/Topic	New technology/ innovations	Compliance/ Implementation	Reporting	Regulation/ policy	Supervision/ Monitoring	Regime effectiveness
Campbell-Verduyn, M.	2018	Digital currencies	x			x		x
Cash, D.	2019	Sigma Ratings	x	x				
Cotoc, C. Nițu, M., Șcheau M, & Cozma, A.	2021	AML, EU directives, efficiency, FIU's			x			x
de Koker, L.	2014	Customer identification				x		
De Vido, S.	2020	Digital currencies	x			x		
Jayasekara, S. D	2018	Supervision					x	x
Kesoony, S	2016	Enforcement of international law		x		x		
Levi, M., Reuter, P., Halliday, T.	2017	Evaluation of effectiveness, data						x
Nance, M. T.	2018	FATF, effectiveness						x
Pol, R. F.	2018 A	Policy effectiveness						x
Pol, R. F.	2018 B	Effectiveness of the AML regime						x
Pol, R. F	2020	AML effectiveness				x		x
Shehu, A.	2012	AML and financial inclusion					(x)	

Saperstein, L., Sant, G. & Ng, M.	2015	Cost-benefit analysis						x
Rose, KJ	2020	AML regulation, CSR				x		
Gara, M., Pauselli, C	2020	SAR and risk level matching			x			
Naheem, M	2020	Agency theory			x			
Imanpour, M., Rosenkranz, S.,Westbrock, B., Unger, B.	2019	Social networks, policy optimisation				x		
Arnone, M & Borlini, L.	2010	ML regulation				x		
Chong, A., Lopez De-Silanes, F.	2015	Determinants of ML, AML policy				x		(x)
Unger, B.	2013	Two decades of research						(x)
Gordon, R.K.	2010	Critique of the current approach				(x)		x
Clarke, A.E.	2020	Critique on AML						(x)
Jayasekara, S.D.	2020	Impact and implementation of the FATF framework						x
Kemal, U	2014	Effectiveness of the AML				x		x
Yeoh, P	2014	Whistleblowing, Financial services, ML, AML, Whistleblowers						(x)

Table 2 Selected articles

6.1 AML effectiveness in academic literature

Academic literature has approached the subject of the effectiveness of the AML by criticising the non-existence of a credible and profound cost-benefit analysis of the AML. Mostly the methodology of the research on these studies has been argumentative essays as the gathering of empirical data poses problems in forms of privacy and asymmetry. The problem with privacy is that data on matters is often sensitive, and details are not public. This concerns FIU data as well as bank data. FIUs surely deliver statistical data, but banks are commonly very private about sharing customer data. The problem of asymmetry has also been approached in the studies and it refers to the situation in which entities working on AML gather data, but the data is not comparable.

As means of research it does differ if, by the effectiveness of the AML, we mean the FATF framework, the whole international AML regime or a policy. We can also solely study the effectiveness of a single AML function such as KYC, black-listing, CDD, transaction thresholds, SAR or others. Likewise, we can frame the question on a larger area such as detection, reporting, criminalisation of the predicate crimes or confiscation of criminal proceedings. This drastically changes the scope of the study and affects what sort of conclusions can be drawn, and on what scale. It might be difficult to argue that detecting major problems in one area would be sufficient to conclude that the whole AML regime is ineffective. However, if we have a bowl, but the bowl has a hole on the bottom, it will not hold water as was the function it was meant to serve. In our actual context of the AML, the existence of deficiencies in the system does not necessarily mean they are exploited. Yet, it would be naive to assume that they would not be. In the next few pages, we are collectively processing observations and conclusions from the selected articles presented in Table 2. The thematic classification of the articles in the table is to ease the accessibility. There exist three main viewpoints on the selected articles. First are the articles that discuss or try to grasp the actual effectiveness of the AML regime or criticise it. Next, we have the articles that have a narrower scope. They concern with either the effectiveness of a sub-factor of the AML as a singularity or suggesting a possible contribution of this sub-factor to the overall effectiveness of the AML. Lastly, we have a few articles that have interesting suggestions on future possibilities. The text has been divided into three sub-chapters accordingly.

6.1.1 Is the regime effective?

Is the AML regime effective? This has been a valid question among FATF members for quite some years (Nance, 2018). There is a difficulty in measuring effectiveness in social science because of the complex nature of the phenomena and the difficulty of verifying causality (Nance, 2018, 123). As the AML system evolves and new actors emerge, the roles of different actors and their interactions remain open. (Nance, 2018, 124). If anything, the system and environment are dynamic. Pol (2020, 3) argues that the AML movement has not been able to demonstrate effectiveness as means of impact and effect of policy as is generally understood as effectiveness. Despite FATF's announcement of a major policy change toward assessing effectiveness. Pol (2020, 3) argues that the core policy has largely remained the same. This is implied by not being able to access effectiveness other than as means of framework implementation, not as an evaluation of exogenous effectiveness. From the last

chapter, we remember the differentiation between endo- and exogenous effectiveness. The best assessment of the effectiveness of the AML regime likely includes both hard exogenous measurements as well as more adaptable endogenous measurements (Nance, 2018, 16). The most centric problem in measuring exogenous effectiveness is the lack of reliable data (Nance, 2018, 125), and this is a commonly recognised shortcoming in studies. Inconsistencies and irregularities have also been reported concerning data in MERs and NRAs, which results in difficulties when comparing the data as means of comparability (Levi, Reuter & Halliday, 2017).

The fact that FATF has indeed taken on the table the measurement of effectiveness has raised hopes over the years in academics and despite several shortcomings, the direction shows the importance of the matter. Resources are currently severely limited concerning the scale of the phenomena and even though slightly promising, the FATF's approach is currently seen as lacking credible exogenous measures to verify the causality between compliance with standards and a decrease in money laundering. Policies are based on what is thought to be effective and thus it is a current concern to study how the subparts and outputs perform in means of effectiveness and how this could be improved. A great amount of adaptability is vital as the environment is in constant change, concerning mostly technological evolution but by no means restricted to it. FATF however has a long history of adjusting its standards and guidance (Pol, 2018A, 226). Similarly to Nance (2018), Pol (2018A, 216) criticizes that the outcomes in FATF's evaluation are not measured as outcomes but rather as means of output and activities, therefore missing the opportunity to focus on the assessment of actual outcomes. The conclusion is similar to FATF evaluation and can be credibly argued to be endogenous. As of now, there is an immediate lack of proof of causality between the inputs, activities and outputs with defined outcomes. A profound notion is made by Tang (2010, 3) as he cleverly points out, that it is a different thing to deter criminals from abusing the financial system as means of laundering and another thing to reduce upstream crimes. The proceedings can also be invested in the shadow economy and not all of it is laundered. So, there is a difference if the target is to secure the financial system from laundering and to see that the proceedings are not spent outside the "official" financial system. If the proceedings can be invested or used in a meaningful way to buy commodities in the shadow economy the prevalent impetus that criminals should not be able to use their ill-gotten gains as this creates an incentive for crime, is not work if predicate crimes are not the focus.

AML system has failed in bringing forward credible evidence of the effectiveness of the system and analysis of the mutual evaluation reports and national risk assessments indicates that the efforts to the actual evaluation of effectiveness have been very limited (Levi, Reuter & Halliday, 2017). More so it seems that FATF is satisfied with the countries seemingly doing something on the matter rather than trying to evaluate if they are doing the right things. As Levi et al. (2017) point out regulatory, criminal procedure and criminal justice enhancements are not equivalent to the reduction of crime, which is closely linked to FATF's goals on money laundering. Moreover, they criticise the evaluation process of MERs on the lack of quantitative and qualitative data on serious criminality (Levi, Reuter & Halliday, 2017). Poor data quality has been more widely critiqued as a shortcoming of effectiveness measurement (Pol, 2020, 4). In his critique Pol (2020, 5) even goes as far as to speculate on the possibility of group thinking being a reason the AML regime has been continued on the road of incremental changes despite clear ineffectiveness. Pol (2020, 5) sees the AML regime relying heavily on the narrative that the framework is effective if it is implemented in adequate measures. Therefore, compliance with the regulation is one of the centric goals as it is seen as a way to secure proper implementation and appearance of it under regulation. Incompliance on the other hand resulted in sanctions which within the banking sector have raised to seven figures through prosecutions. In many cases it can be more compelling to repeat the narrative of enhancing the implementation and framework itself and bypass evaluating this approach with enormous sunken costs and effort having the effect that is desired, securing that the financial system is not exploited by launderers and illicit gains. Single countries may also experience significant international pressure from FATF and other countries so as not to question too harshly the current effort. This is speculative, but in the case of such a regime so widely spread it is a realistic assumption. Nevertheless, the AML regime has been overall successfully implemented and overcome political difficulties thus reaching wide acceptance (Pol, 2020, 7). The question remains if the solution is an effective answer to the problem. Even though Pol (2018a, 2018b, 2020) criticises harshly the current AML approach of lack of evidence and the continuation of enhancement and adjustment of it, the lack of evidence does not mean that the approach cannot be developed to be effective. Not to mention the lack of evidence on effectiveness does not prove ineffectiveness. Though, the confiscation rates reported by countries compared to estimates of criminal proceedings actions give credit for critique on validity (Pol, 2018b, 2020; 10). Statistics presented based on data retrieved from UN and Europol. Pol (2020, 16) presents that criminal funds generated annually in Europe are estimated to be an amount of 110 billion euros whereas illicit funds

confiscated are only about 1,2 billion euros and only half of this amount is attributable to AML policies. On the other hand, the compliance costs due to AML policies are estimated to be approximately 144 billion (Pol, 2020, 16). The global numbers retrieved from the UN show criminal funds to be estimated at an amount of 3 trillion USD, confiscated amount of 3 billion USD and compliance costs over 300 billion (Pol, 2020, 16). The numbers are not straight comparable as the amount confiscated in Europe is absolute and UN numbers include the funds "seized," meaning there is a possibility of return.

Despite all of the previous, FATF's approach has not been criticised in academic literature for being a poor evaluation of the effectiveness of the implementation, which it seems to be. The source of critique has been that it states to measure something else than it does. Within this light, it seems that as we do have a fairly consistent measurement of the effectiveness of implementation as an endogenous measurement, we need the exogenous measurements to verify it is delivering what is intended. According to the numbers of estimated criminal funds overall, amount confiscated, and compliance costs involved this does not seem to be the case (Pol, 2020).

One of the major concerns remains how to measure the amount of laundering and connect it to an outcome of the AML regime. Borlini & Arnone (2010, 233-234) point out the need for money laundering estimates to be narrowed down in range as current estimates range from 2,85 trillion to 200 billion globally (Borlini & Arnone, 2010, 234). Further data on academic efforts in estimating the magnitude can be found in Quirk, 1996; Walker, 1999; Tanzi, 2000; Chong & Lopez de Silanes, 2006; Schenider, 2008; and Barone and Masciandro, 2008 (Borlini and Arnone, 2010, 234). In empirical research in New Zealand, it was observed that only a fifth of the investigations, which resulted in forfeiture of criminal assets was triggered by AML mechanisms in place (Pol, 2018b, 12). Pol (2018b, 11) also presents data requested from officials globally that shows estimated crime proceeds seized by authorities as a fraction of estimated crime proceeds differing from 0,1% to over 3,3%. Data was collected from the UK, CAN, AU, EU, NZ and on a global level. If we consider most of the proceedings are being classified under the AML regulations as money laundering, the percentage seized of all proceedings would indicate serious problems in the regime. Not mentioning that almost 80% could be possibly detected independently from AML regulation. Necessary assumptions to make a such conclusion would be that the estimate of the total proceedings is fairly accurate as interdiction rates are fairly reliable. Yet it does not prove the system to be inefficient, it could also be a matter of re-evaluating the scaling of efforts. There remains no consensus on

whether “more of the same” would be any better and possible revolutionary approaches might be necessary (Pol, 2018b, 15).

A possible answer to this would research such as Chong & Lopez de-Silanes (2015), who conducted a regression analysis to detect ML determinants and whether they were affected by the AML regulation. They used a cross -country data on little less than 100 countries in an attempt to connect them with the magnitude of laundering. According to the study by Chong & Lopez- de Silanes, 2015, 100-121) AML regulation seems to matter, but the most significant effect was on the levels of confiscation and criminalising feeder activities. This suggests that there is a possibility of more efficient resource allocation, given that we have acquired adequate data on what works and what does not.

Besides the anxiously needed exogenous measures, endogenous measures have their place in creating coverage and as Nance (2018) mentioned, a combination of the two is most likely the best alternative. In this light, the mutual evaluations conducted by the FATF reported shortcomings in preventing criminals from infiltrating the financial system, licensing and registration, verification of beneficial ownership, implementing risk-based supervision, understanding sector-specific risks, supervision of DNFBPs and imposing enforcement measures according to AML obligations (Jayasekara, 2018, 602-603). Jayasekara (2018) also observed that there is a positive correlation between the effectiveness of the AML supervision measured in mutual evaluations and the income of the country. This would mean that countries with lower income are considered more high-risk in terms of lack of supervision, which is known to enable fraudulent behaviour. This is very consistent with the observation that de-risking poses a threat to financial inclusion and therefore to AML.

What has happened to the amount of laundering? Unger (2013, 1-17) points out that rather than decrease, the amount of laundering has increased in the past 20 years. This is mostly due to the broadening of the definition of what is considered money laundering, but there are also indications that laundering has increased in traditional ways such as fraud and corruption (Unger, 2013, 1-17).

6.1.2 What could be done better?

There is a variety of aspects in which researchers see a possibility of improvement or matters that are otherwise important to recognise. These include matters such as resource allocation, reporting, CDD procedures, financial inclusion and others that we briefly go through.

How should the resources be allocated? Imanpour, Rosenkraz, Westbrock, Unger & Ferwerda (2019) studied optimal budget sharing in the context of AML. According to their game theoretic set-up, they included factors such as cost of laundering, risk of detection and punishments for laundering. The conclusion was made that to decrease the amount of laundering it would be optimal to divide the budget using approximately 35% on detection and respectively 65% on making it harder for criminals to launder their proceedings (Imanpour, Rosenkraz, Westbrock, Unger & Ferwerda (2019). This is a practice that could be piloted in a test country, given a credible measure of amount laundering.

The regime has had difficulties due to the roles in the field, especially concerning the role of banks. In their study, Gara and Pauselli (2020) formed an econometric model aimed to match banks' AML efforts with money laundering risk, which is assessed through selected indicators. Even though robust and in need of tuning, results were promising and the demand for this sort of tool for supervising bodies is evident. The practical value of this kind of model would be to tackle the so-called "crying wolf" -problem. Crying wolf was the case according to which banks over-report suspicious activities to avoid punishments of non-compliance not reporting. In practice through such a tool supervisors could evaluate banks' actions in terms of whether they are over-reporting or under-reporting. There is no necessity for this to be a one-way street and it could be beneficial for all parties to use this as an indicator added with dialogue on the interpretation. Based on an economic analysis it is suggested that increased costs of laundering also increase the enforcement costs and reduce privacy (Borlini & Arnone, 2010). Reduce of privacy is connected to more extensive permissions for data gathering on individual customers and legal entities. Banks have traditionally been extremely strict on valuing the privacy of their customers and their transactions. This seems to be a cost that needs to be realised and accepted. As a matter, it is very political.

Financial inclusion and AML are seen to be complementary pieces enhancing the security and stability of the financial system (Shehu, 2012). This is important, especially within the context of developing countries (Shehu, 2010, 316).

As an increasing number of transactions are happening within the system there is a possibility of pressing regulations, recommendations and supervision. In the case of the banking system, when we can include banks in developing countries as a part of the financial system, they can be required to implement proper banking regulation and AML framework, which enables adequate supervision and monitoring. And as more people are included in the financial system it is logical to assume a decrease in the amount of demand for financial services outside the financial system where monitoring is significantly harder. Therefore, a larger fraction of all economic activities happen under the system with supervision. Shehu (2012, 320) argues that unless low-income people are included in the "official" financial system the AML regime cannot be effective. As in the light of coverage discussed in the earlier chapters Shehu's argument and the conclusion are seemingly logical and should be taken seriously. Considering the importance of financial inclusion as part of enhancing the regime, it is concerning that regulatory punishment and compliance costs have reportedly affected banks retreating from high-risk countries and businesses (Saperstein, Sant & Ng, 2015, 5). Sant & Ng, (2015) call this activity de-risking by selecting not to operate with entities or areas that are considered risky. This indicates the possibility of financial exclusion from the financial system partly due to the banking system choosing to avoid certain countries and businesses due to the risk involved and therefore possible financial punishments. The phenomenon is known in the literature as "de-risking". The citizens and businesses will still have the demand for financial services and therefore are forced to operate on a cash basis or alternative solutions outside most of the supervision. This is assumed to weaken the AML regime as more transactions happen outside the monitored financial system. This is the reality for example American-Mexican border and Somalia (Saperstein, Sant & Ng, 2015, 7). Due to negative effects and costs of compliance, a cost-benefit analysis is urgently needed (Saperstein, Sant & Ng, 2015, 8) and such research would enable us to evaluate and optimise the policies to minimise negative effects concerning wanted outcomes. It is commonly argued that regulatory action should not take place unless the benefits can be considered to exceed the costs of the policy. In the context of AML, Kesoony, S (2016) emphasizes the importance of countries agreeing on the judicial level on what is ML and how to enforce the agreed norms in the international context. As crucial as this, is that actors truly follow the norms as likewise to the weakest link reference it only takes one high volume actor to enable a massive infiltration of the system. For instance, a lot has been written about the HSBC scandal. As one of the largest global banking and financial service providers HSBC was recorded to accept funds derived from organised crime and at the very least failed to recognise the origins

of these funds resulting in concealing amounts of illicit funds counted in billions in Asia and Latin America. HSBC was eventually fined 1,9 bn US dollars by US authorities (Guardian 2012). The alternative would have been to press criminal charges on the bank most likely resulting in losing its banking license in the US (Guardian, 2012). Conveniently no charges were pressed, and the bank bought its way out of the scandal. It was reported that HSBC was processing funds for example the infamous Mexican-originated Sinaloa Cartel (Guardian, 2012). The fact that authorities are ready to pose such fines would indicate that non-compliant entities are wanted to be held accountable (Kesoony, 2016; Clarke, 2020). As scandals with large fines continue it is questionable if the policy has the wanted outcome of banks not facilitating ML (Clarke, 2020, Halliday et al., 2019). The existence of a framework is not solely enough, but it needs to be implemented adequately and achieve what is intended (Jayasekara, 2020). Monitoring countries with AML deficiencies is important for the protection of the global financial system. This conclusion is in line with Shehu (2012) who called out for financial inclusion in developing countries.

When it comes to sanctions and financial inclusion, Saperstein, Sant & Ng (2015), question the act of imposing sanctions on banks based on supposed assumptions of non-compliance and emphasize the need for cost-effectiveness analysis as banks are obliged to comply with the regulatory demands of AML without an indication that the policy is indeed effective. Saperstein, Sant & Ng (2015, 4), point out that HSBC, one of the largest banks in Great Britain reported spending 750-800 million US dollars annually on AML compliance, which is a quarter of its operating budget in the US. Saperstein, Sant & Ng (2015, 5) criticise regulators for overemphasizing higher standards, increasing the number of employees and increased spending on AML as inputs that necessarily reduce financial crimes. Regulatory actions and enforcement would be beneficial based on empirical research and scientific studies, more than it currently is (Saperstein, Sant, Ng, 2015, 5). Saperstein, Sant & NG (2015, 3) implicate that regulators have incentives to address new threats with extensive regulation promptly and the response has an effect on their job security and recognition from colleagues and officials. In other words, they imply that the system has mechanisms to sustain itself and some of these will result in more regulatory requirements even though the compliance costs do not directly concern them. Examples used to demonstrate cases, where banks were punished without a clear indication of a crime other than non-compliance or assumption, include Banamex USA, Citibank and Bank of Montreal (Saperstein, Sant & Ng, 2015, 3). Regulators have the authority to implement new pieces of regulation and

compliance is expected, this is not the problem they are implying. More so banks are required to process the transactions made and form a process to detect suspicious activities without clear requirements on how this is to be done, leaving it for the supervising bodies to judge if the approach chosen by a single bank using discretion is seen adequate. If this is judged not to be an adequate approach or non-compliant banks can and will face sanctions most likely in the form of fines, even without an indication of transactions including criminal proceedings. So, potentially banks could have an effective AML and still be non-compliant.

One indicator that has been used for ML and relates to banks as obligated entities are SAR. Reporting is one of the cornerstones of the current approach, however, the number of reports and dissemination rates tell us more about reporting and enforcement practices rather than the trend of laundering. In a study using data from 20 European Union member states FIU's Cotoc, C. Nițu, M., Șcheau M, & Cozma, A. (2021), reported an increase in the suspicious activity reports disseminated to competent authorities between the years 2018 and 2019. In the study, one of the methodologies was to use the number of cases disseminated as a measurement of efficiency. Even though the number of cases disseminated does not guarantee that any level of efficiency is included as they point out themselves. It can be argued that the increase in cases disseminated signals that an increasing action is taking place as means of effort. In this case, the dissemination is separate from the suspicious activity report itself and means the action of the FIU passing the information it has received from STRs and has regarded as a valid susception for a competent authority. What was concerning in the study was that the data collected from the FIUs included cases in which either accountants, auditors or lawyers were included in schemes in a centric role enabling the laundering through direct assistance or completely taking over the process (Cotoc, Nițu, Șcheau & Cozma, 2021, 11). As an interesting detail, since the enhanced reporting duties on transactions with high-risk countries the number of STRs were reported to rapidly increase in some countries (Cotoc, Nițu, Șcheau & Cozma, 2021, 8). For instance, in the Netherlands, growth in the amount of STRs was recorded from 753 352 € to 2 462 973 € within the years 2018 to 2019 (Cotoc, Nițu, Șcheau & Cozma, 2021, 8). Of the STRs in 2019, only 686 were considered suspicious after allegedly processing the reports (Cotoc, Nițu, Șcheau & Cozma, 2021, 8). To manage this kind of increase in volume within a brief period begs the question are they all valid. Is it the case as argued in the "crying wolf" – theory that FIUs are overflood with STRs stemming from the increased reporting duties for obliged entities? On

the other hand, this underlines the necessity of the use of technology and analytical modelling to manage ever-increasing data.

As obliged entities banks have a double agent role towards the regulator and the client (Naheem, 2020, 27). On one hand, the bank can be seen to serve the client's best interest and on the other hand, meet the requirements placed by a regulator. These functions can conflict (Naheem, 2020, 27) as meeting the regulators' demands increases operating costs, which are ultimately allocated to clients. According to agent-principal theory, the agent works to settle the owner's (principal) interests with the client's (customer) needs. When used in the AML context in the banking sector it has a new sidekick as all the clients are not equal in the eyes of the regulator. From a position of a single bank, if assumed no non-compliance sanctions, the bank has an incentive to act against the regulator as accepting criminal proceedings is a capital flow towards the bank. And if recognised as a criminal proceeding, it could be used to charge higher margins than a legal business, due to the risk involved. In the case of an international bank that operates cross-borders, it is evident that supervision of banks is needed. As Naheem (2020, 27) states in the case of HSBC US and HSBC Mexico there was reportedly no internal risk assessment concerning transactions between these entities, even though drug cartel cash flow was a widely recognised risk. HSBC US was later punished for this non-compliance with fines of 1,9bn US dollars (Guardian, 2012). This with the reasoning presented earlier would indicate that banks indeed have an incentive to dismiss obvious "red flags" for additional gains. Naheem (2020, 34) calls out for cooperation between clients, banks and regulators rather than relying on legal options and aggressive tactics. He also points out the threat AML regulation pose to the profitability and timeliness of banking services and possible force majeure for small banks in form of too high compliance costs of AML for small operators (Naheem, 2020). Gordon (2010, 507) argues that rather than passing the authority and duty to the private banking sector government should take the initiative to supervise and monitor laundering activities. The private sector has incentives to not comply and worst case could potentially assist in avoiding regulation (Gordon, 2010). Gordon (2010, 509) suggests that the private sector should only identify customers, create initial profiles of them and pass the information onto FIUs. There exists somewhat overlap when the private sector has to report identified SAs followed by authorities deciding which of these are suspicious. Moving the detection of suspicious activities to the public sector and using the private sector only as a database would free the system from the problem of overreporting to comply, decrease compliance costs of the banking industry, could potentially

increase the expertise and methodological readiness of the FIU's as best practises could be utilised widely in case, they would process the whole data masses. On the other hand, FIUs would need significantly increased funding. It would however free authorities from most of the evaluation work on whether entities are complying, and it could potentially fix the problem of private entities having incentives for non-compliance.

One of the processes used in the risk-based approach in the identification of risks of ML is CDD, which is strongly linked with profiling customers to identify typical behaviour of a customer with a certain profile and therefore detect unusual behaviour and suspicious transactions. In this process, FATF's view has been criticised to trust too much on state-issued verification documents for customer identification purposes and not questioning the possibility of identity theft (Koker, 2014, 286). It is argued that the Basel Committees' processes for customer risk profiling and verification of identity contain more detailed data compared to the FATF methodology and therefore enable more accurate risk profiling of customers (Koker, 2014). This would indicate that there exists space for the wider spreading of best practices. On the other hand, banks are considered to have a centric position in the financial system, so, logically, the regulator would impose stricter expectations on them as happens with the Basel Committee. Koker (2014, 293) points out the lack of evidence that FATF's customer identification is effectively fulfilling its purpose due to shortcomings in verification and identification processes largely concerning cases of identity theft. On the other hand, there has been recorded to be a weak correlation between customer record keeping and the amount of ML (Kemal, 2014, 422-426). In addition, employee training seems to have a moderate negative correlation with an estimated amount of ML Kemal (2014, 422-426). This gives us some indication of an effect. Lastly, it is worth mentioning that the system could potentially benefit from harmonising the penalties (Clarke, 2020) so that it would not be at the country's discretion. This would undeniably lead to a decreased asymmetry and eliminate the target countries based on less harmful sanctions on laundering.

6.2.1 What is new?

Currently, there have been few interesting new developments that would enable the private sector to have a new role and the market mechanism to work on the AML regime. This could affect the effectiveness discussion. It has been suggested that including AML in the EU's CSR (corporate social responsibility) directive could create an incentive for companies to use

AML efforts as a competitive factor (Rose, 2020). In practice, companies would be required to disclose their actions involved in combating money laundering as a part of responsibility reporting. In this way, companies could communicate their efforts to stakeholders and also to customers. This would give a company an incentive to enhance their efforts if it would give them a competitive edge in comparison to competing rivals. This approach would give the companies a competitive aspect familiar with the nature of the private sector. However, there has been another interesting development from private sector Credit rate agencies, which are known for their services in the financial markets as they can rate for instance certain investing instruments or possible client's creditability. Using this familiar credit rating agency model which rates entities from AAA to C, Sigma Ratings is doing the same but with a scope of financial crime compliance (Cash, 2020, 6-9). The obvious threat with a credit rating is like we have learned from the 2008 financial crisis, that the ratings can be inflated, and those who depend on the expertise of these agencies the most are usually incapable of properly assessing the quality of received service. In this case, evaluating whether the credit rating is valid, is somewhat a paradoxical situation. Nevertheless, as a private innovation, this new market-driven opening is very welcome. If the company can grow and even thrive, it would indicate that compliance with AML is valued to a point that companies are willing to pay for it with their resources. It could also alleviate some of the pressure posed to banks at the moment as the "gatekeepers" of the financial system. Of course, it does not necessarily mean that this role is changing anywhere soon. If successful and widely integrated this sort of market-driven partial solution could potentially allocate the costs of the AML more efficiently as the market mechanism is thus far from the most effective allocation method. Existing ratings including FATF evaluation, give a country or an entity an incentive to fabricate and manipulate the results where possible. One other possibility of enhancement has been the suggestion that the AML regime could potentially benefit from whistle-blowing mechanisms (Yeoh, 2014, 327-342).

As one of the biggest current trends is technological development and as an extension digital currencies. It is also a great demonstration of the dynamic capability to adapt to the FATF. Are digital currencies a threat or a possibility? Campbell-Verduyn, M (2018) assess the effectiveness of the global anti-money laundering regime in balancing the challenges and opportunities presented by crypto. They advance with two arguments. First, the threat of digital currency is stemming from the usage of blockchain technology and the possibilities related to this technology rather than the threat of current illicit usage as currency (Campbell-

Verduyn, 2018, 2). Second Campbell-Verduyn argues that despite multiple shortcomings, FATF´s risk-based approach balances effectively between existing threats and possible opportunities when it comes to digital currency (Campbell-Verduyn, 2018, 2). FATF´s structure as a decentralised network is seen to be innovative and more effective than a traditional centralised organisational form due to fast technological change (Campbell-Verduyn, 2018, 3).

The three traditional characteristics of money are that it serves as a medium of exchange, a store of value and a unit of account. It is widely recognised that digital currencies have not so far gained the position to be used widely as a means of exchange. The companies accepting digital currency as a payment method are most often either marketing a certain digital currency, there exists another underlying mechanism that forms gains or it is the hope for future gains due to the increase in value on the markets. As a store of value digital currencies have also been recorded to perform poorly at least in the short-term as the volatility is extremely high with these instruments. Unit of account is generally referred to as the use of measurement of value. Yet if we take a look at the digital currency, it is too volatile in terms of exchange rates and therefore purchasing power. In addition, it has gained a low rate of acceptance. It has been performing poorly as an alternative to conventional money. Yet it poses a threat to AML. According to Campbell-Verduyn (2018, 4), this is for two reasons. First, digital coins can nevertheless be used as a means of a transaction independently of how good or bad they perform in serving the purpose of conventional money (Campbell-Verduyn, 2018, 4). Second, digital currencies act in nearly real-time and are quasi-anonymous (Campbell-Verduyn, 2018, 4). Quasi-anonymous in this context means that transactions as a part of the blockchain are initially public and the accounts used for transactions can be traced yet connecting the digital wallets to the actual owner can be inefficient and time-consuming. It is the problem of anonymity and decentralisation that makes previous regulation ineffective as most regulation assumes a centralised actor that is required to implement the regulation and norms (Campbell-Verduyn, 2018, 5). As a demonstration, we can ask who is to conduct a know-your-customer procedure on a customer when the customer itself is part of the organisation and officially there is no one in charge. Despite the theoretical threats posed by the digital currencies on AML it has been reported that in action this has not been observed in studies even though institutions such as IMF and SWIFT among many others have been warning of the threats these “altcoins” pose (Campbell-Verduyn, 2018, 5). If anything, large institutions and companies in the financial sector have publicly avoided digital currencies

(Campbell-Verduyn, 2018, 5). FATF has in line with the risk-based approach promoted a deeper understanding of the digital currencies within the members and advised to centre resources on investigating cases which intersect with fiat currencies (Campbell-Verduyn, 2018), as they have more potential to be illicit infiltration to the traditional financial system.

FATF has been criticised to have a largely symbolic role as appearing to "do something", but without actually restraining capital flows (Campbell-Verduyn, 2018, 11), as it would lead to increased systemic inefficiency due to increased capital costs. On the matter of digital currencies, FATF can be criticised to lean too heavily on the market actors and expectancy of technology-based solutions to supervise the use of digital currencies (Campbell-Verduyn, 2018). Currently, digital currencies seem to be assessed to a sufficient extent by the FATF as it has not been recorded that digital currencies would be widely used to carry out a transaction of illicit funds. Nevertheless, they pose a possible threat and the reality in the future will most likely be defined by technology, the ways the digital currencies are being used and the possibility to supervise these transactions cost-effectively. There is also a possibility of criminalising the use of these altcoins if the threat is considered actualised. As De Vido (2010, 11) points out one of the alternative two scenarios will likely actualise, either the digital currencies remain as a parallel system with restrained access to the financial system or adapts the rules of the system to be accepted by the financial system. The question remains open, what kind of modifications need to be made for the digital currencies to be widely accepted. This could mean that there would be an identity verification process when creating a digital wallet so transactions would be transparent from the transaction to the person committing the actions. It is also possible that states or unions such as the EU could create their own digital currencies. As for now the implications and threats digital currencies pose in the future are not particularly clear but remain to be seen.

6.2 AML effectiveness in FATF methodology

FATF conducts mutual evaluations on the members of the FATF regime -meaning countries that have ratified the 40 recommendations. These evaluations are meant to monitor the country´s technical compliance with the issued recommendations and to evaluate the effectiveness of the country´s AML system (FATF, 2020, 4). FATF has published a handbook of the methodology on how the assessment of effectiveness should be conducted and what factors should be considered.

The methodology for assessing the effectiveness of FATF is based on a hierarchical model, which consists of three levels of objectives (FATF, 2020, 16). On the lowest level are the 11 immediate outcomes, which reflect the major outcomes FATF wishes to assess since other level objectives and outcomes are not evaluated at all (FATF, 2020). Each group of the immediate outcomes is formed around distinct factors, which FATF sees together adequately represent the effectiveness of the country´s AML system. These 11 outcomes are scored on a four-point scale. These four points are named low-, moderate-, substantial -and high level of effectiveness (FATF, 2020, 21), and even the highest point, the high-effectiveness can be granted when minor improvements are required (FATF, 2020, 16). For each outcome, the person conducting the evaluation should "try" to answer two questions,

"To what extent is the outcome being achieved? and "what can be done to improve effectiveness?" (FATF, 2020, 17-18).

To answer these questions, it is advised to "base their conclusions – on the core issues, supported by the examples of information and the examples of specific factors; and taking into account the level of technical compliance, and contextual factors" (FATF, 2020, 17-18). If we take a look at what this means in practice, we can inspect closer the immediate outcome 1. Content of outcome 1. is

> *"Money laundering and terrorist financing risks are understood and, where appropriate, actions co-ordinated domestically to combat money laundering and the financing of terrorism and proliferation"*

Now, this is provided with a list of questions on "Core Issues" and a list of descriptive statements on "examples of information" and a list of questions on "examples of specific factors". On what level the effectiveness of the outcome has been achieved should be evaluated reflecting on this given information. Now, on this outcome, there are six "core

issues" (FATF, 2020, 96). From these questions first two starts with "how well" and the latter four with "to what extent" (FATF, 2020, 96-97). If we look at the same immediate outcome 1 on the mutual evaluation report template (FATF, 2020, 139-140), which advises on reporting, it is evident that the evaluation requires a lot of discretion. It is characterised by expressions such as:

*"-- should note any **general considerations** regarding the country's risks--"*

*"-- should also summarise assessors' **general impression** of whether the country **appears to** exhibit the characteristics of an effective system"*

*"--it **may be appropriate** to -- it **may be** better to --"*

Expressions are similar along the core issue lists on different outcomes and along with the mutual evaluation report template (FATF, 2020). Based on these, a similar statement shall be made on the four-point scale of all the eleven key goals -immediate outcomes. In the case of immediate outcome one, the value given contributes to the achievement of intermediate outcome one,

"Policy, coordination and cooperation mitigate the money laundering and financing of terrorism risks"

Intermediate outcomes are just part of the model but are not evaluated directly (FATF, 2020, 16). Yet they are a crucial part of the model and demonstrate the logic of how the lower-level outcomes are presented to contribute to the ultimate goal of the whole model. This goal is called the high-level objective, according to which

"Financial systems and the broader economy are protected from the threats of money laundering and the financing of terrorism and proliferation, thereby strengthening financial sector integrity and contributing to safety and security"

The point of highlighting these is to demonstrate that the assessment of effectiveness is by no means absolute. Meaning by that that it does not quantitatively substantiate that this high-level noble objective has been achieved or the actual amount of laundering being affected on any level. It merely evaluates whether the country appears to recognise the risks of laundering and how it appears to answer to these risks. It does not provide information on the actual relevancy of the recognised risks nor that the actions conducted are effective in preventing laundering in a significant amount. Merely the actions taken are evaluated in

relation to recognised risks, which might be an incremental part of the risks the country is facing. Recognising risks and taking appropriate actions is the basis of the risk-based approach. It is a more dynamic and flexible approach than the previous rule-based approach. Yet, in the context of FATF´s evaluation, it leaves a lot of place for discretion and raises the question of whether the entities obligated to conduct risk assessments as part of their operations possess adequate knowledge of the phenomenon to effectively assess the risks. The assessment of effectiveness by the FATF is a continuum of technical compliance and reflection on taking actions suggested in the 40 recommendations, which is not convincing proof that financial systems and the broader economy are protected from the threats of money laundering.

The evaluation of effectiveness by FATF is endogenous and there are no guarantees of significant exogenous effectiveness. “The Immediate Outcomes describes the main features and outcomes of an effective system” (FATF. 2020, 18). So, the effective system is an ideal of a system that prevents ML and TF, and this is assumed to be achieved through these steps called “immediate outcomes”. There is undoubtedly some evidence that many factors that are included in the outcomes affect ML, such as international cooperation (Ferwerda, 2009) and STR (Kemal, 2014). Kemal also found a negative relation between staff training, keeping customer records and ML (Kemal, 2014). In addition, Lopez De Silanes and Chong (2015, 78) found stricter ML regulation to be linked with lowered levels of ML.

Overall, the outcomes sound very logical to common sense; however, the achievement of these outcomes remains highly subjective as discretion is playing a significant role. The amount of discretion being used in the evaluation was demonstrated by (Gordon, 2011, 525) according to whom: “the phrases in quotes, including "reasonable measures," "is satisfied" "where necessary," "appropriate," "special attention," "apparent," "as far as possible," "suspects or has reasonable grounds to suspect," are not defined in the Recommendations nor the Methodology”. They are anything but clear and objective, unavoidably giving rise to subjective implementation (Gordon, 2011, 525). Just the fact that the evaluator considers proper actions being taken about a recognized risk does not guarantee an effective outcome from an exogenous point of view as proper action could effectually mean filing a false positive suspicious activity report while the next transaction could be a false negative. Just that actions are taken does not equal those actions being effective, nor does it mean it is done in a cost-efficient manner since we have no hard data on the overall exogenous effectiveness. All we know is that “there are some hints that traditional areas of laundering such as fraud

and corruption proceeds have increased rather than being effectively combated" (Unger, 2013, 1). It must be recognised that the definition of ML has simultaneously broadened (Unger, 2013, 16), which makes it more difficult to compare estimates of laundering. After Unger´s article, the list of predicate offences has expanded significantly (EU AML directives 4 and 6).

7. RESULTS AND DISCUSSION

How can the effectiveness of the regime be assessed? As Nance (2017, 123) pointed out endogenous understandings define effectiveness according to the immediate goals of the institution. Exogenous understandings focus instead on the impact an institution has on larger problem members understand the institution as addressing (Nance, 2017, 123). Based on the review of the academic literature and document analysis on the FATF methodology guide, dividing assessment with the terms exogenous and endogenous seems justified. The FATF's current approach despite a lot of criticism in general is a fairly logical and believable presentation of the endogenous effectiveness of the regime, which evaluates itself according to the immediate goals of the institution itself. If evaluated on this basis, the FATF has not been criticised for the approach. The problem is the lack of exogenous effectiveness, which would focus on the impact an institution has on the actual problem it seems to be addressing. This problem is not the FATFs alone, though it is mostly held accountable for it since it is the regulating body, which other institutions and countries follow with their regulation and who also bear the costs of the regime. It could be interpreted that if these two were to be placed in order, exogenous effectiveness would prevail. This is because the exogenous effectiveness would measure the actual effect the policy has, and not just that it is in place due to the immediate goal being achieved through a successful implementation. It is evident we are doing things, the question is, are we doing the right things that have the desired effects?

Currently measuring exogenous effectiveness is complicated because definitions of what is laundering differ. Laundering is not the same but has many techniques. Regulation differs, meaning the process of AML is not unity as countries do have discretion as well as banks. Costs created in implementation and compliance likewise differ as the risk-based approach leaves a lot of discretion on how the regulation is enforced. Privacy of data makes it harder to access data and the official institutions are not necessarily gathering data in the same form.

Comparability of data is therefore one large problem. It can be however retained to some extent by scoping the reference points from comparable data. This nevertheless makes it difficult to make regime-wide conclusions. Another major problem to be solved is that the methodology of measuring laundering magnitude is in its infancy (Unger, 2013). More accurate estimates of laundering are needed. Also, what we define as money laundering has been widening along the regulation as the number of listed predicate crimes have been increased. This has subsequently widened the problem and the amount considered money laundering. Solving the problem of magnitude would enable us to try linking a policy with the decreased amount of laundering, which is another major concern.

The question, is the regime effective, is a question we are currently unable to give a credible answer to. According to academic research, some factors of the AML regime are associated with declining amounts of ML and some number of confiscations are connected to AML procedures. When comparing the operational costs imposed on all actors with the confiscations succeeded due to the AML regime in monetary terms, the results would suggest it to be a tremendously expensive effort compared to credible results. Despite the lack of evidence on effectiveness, the implementation of this regime has been hugely effective. Taking into consideration the global scope of this regime and how many different institutions it concerns daily; the speed and unity have been remarkable on an international level. This is the one factor the regime is not criticized for despite the wide criticism. The regime has also shown the ability and willingness to change with the changes in the environment as demonstrated by digital currencies and continuous development of the mutual evaluation processes.

For the regime, it is beneficial that the topic of AML has gained academic interests that have the potential to contribute to enhancing the regime. There are a lot of questions that remain under scrutiny. Could the allocation of resources be done more effectively? Should the banks have the role they currently do as the gatekeepers or should a more centric role be given to national FIUs? What is the significance of financial inclusion to the AML and the stability of the financial system? How can we evaluate the quality of SARs and deter FIUs from flooding with false positives? How can we harmonise the systems to tackle the problem of asymmetries? Can we find solutions driven by competitive incentives such as including AML as part of CSR or through private credit ratings? The scene is fascinating in diversity and complexity and the questions around it seem endless, which indicates the action and interest

taken towards the phenomenon. The technological evolution without a doubt poses challenges to the regime and simultaneously it is a great opportunity to create new detection methods and processes while balancing with problematics of privacy.

To conclude, the overall exogenous effectiveness of the whole regime in a comparable way seems currently utopistic. As of now, a more realistic approach for academic research would be to focus on the processes that contribute to the effectiveness of the regime. It seems a proper classification of these processes would be regulation, detection, reporting, and enforcement including confiscation and as the last step prosecution. All of these have quite extensive literature with room for evaluating their effectiveness. It could also be a worthwhile idea to compare the costs created with the best indicator of an effect we have, the confiscation rates. It is undoubtedly not without flaws, but it is hard data on criminal proceedings deterred from being used, which is the ultimate goal. Behind it lies the moral ideology that crime should not be profitable. Confiscated amounts could be further compared with estimates of the overall criminal proceedings. It is good to sharpen the focus, that money laundering is secondary to predicate crimes. If we take the idea, that increasing costs of laundering would subsequently decrease the demand for crimes, our ultimate goal is the decrease crime rates. AML is means, not the end. As of now, it is seemingly important to being able to identify ML trends, estimate laundered amounts and monitor that it decreases (Unger, 2013).

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APPENDICES

Search no	Date of access	Search string	Pro-Quest (Scholarly Journals, Article, peer-reviewed)	Science-Direct (Research Articles)	Scopus (Journal, article)
1	23/2/2021	"Money laundering"	6, 065	1,384	698
2	23/2/2021	"Money laundering" AND effectiveness	1, 981	524	68 (titles, abs, key)
3	23/2/2021	"Money laundering" AND detection	1, 245	424	52
4	23/2/2021	"Money laundering" AND effect	4, 226	986	71
5	23/2/2021	"Money laundering" AND magnitude	688	294	6
6	23/2/2021	"Money laundering" AND (opportunities OR possibilities)	5, 464	1,091	54
7	23/2/2021	"Money laundering" AND actors	2, 096	456	31
8	23/2/2021	"Money laundering" AND economy	3, 689	844	87
Search no	**Date of access**	**Search string**	**Pro-Quest (Scholarly**	**Science-Direct**	**Scopus (Journal,**

			Journals, Article, peer-reviewed, title)	**(Research Articles, title)**	**article)**
9	23/2/2021	(AML OR "Anti-money laundering") NOT leukemia	201	31	161 (LIM-TO Economics and business)
10	23/2/2021	(AML OR anti-money laundering) AND framework NOT leukemia	99	0	53 (LIM-TO Economics business computer sciences)
11	23/2/2021	(AML OR Anti-money laundering) AND effectiveness NOT leukemia	78	2 (business, management and accounting)	31 (LIM-TO Economics business computer sciences)
12	23/2/2021	(AML OR Anti-money laundering) AND (polic*) NOT leukemia	114	1	47 (LIM-TO Economics business computer sciences)
13		(AML OR Anti-money laundering) AND cost-benefit NOT leukemia			
Date of access	**Search string**	**Pro-Quest (Filters: Scholarly Journals, 2010-2021, Article, money**	**Science-Direct (Filters: Research Articles; Title, abstract, keywords: money laundering**	**Scopus (Journal, article)**	**Google Scholar (Via Publish or Perish)**

		laundering, peer-reviewed, full text 2010-2021)	**, 2010-2020)**		
11/10/2021	(AML OR ANTI-MONEY LAUNDERING) AND (EFFECTIVENESS OR COST-EFFECTIVENESS OR EFFICIENCY) AND (REGIME OR FRAMEWORK)	179	21	39	1000 (maximum amount of search results)